JANUARY, 2024 VOLUME 21 ISSUE 1

THE LOGGER'S BARK

Radio Club of Tacoma

HAPPY NEW YEAR
2024

Cover: Tower at W7UUU
January, 2021

ELECRAFT KH1
TRANSCEIVER
WHIP
17-15 m
OFF
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14000.08 C +.00
S0 n2 20:42
SPD-
SPD+
ATU
MSG
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PFn /XMTR
BAND /MODE
MENU
ON
TAP
HOLD
AF/MON SPOT
KEY /DATA
VFO 1 kHz

In this issue:

- Elecraft KH1 QRP Transceiver p. 61
- New! Microcontroller World! p. 63
- New! EmComm Section p. 53
- New! W7DK Living Histories Series p. 60
- New! RCT Way Back Photo Booth! p. 44
- Find the hidden word contest! p. 59
- And much *much* more!!

W7DK
Radio Club of Tacoma
Founded 1916
ARRL
RADIO CLUB OF TACOMA
W7DK

www.W7DK.org

Radio Club of Tacoma
1249 South Washington Street
Tacoma, WA 98405
253-759-2040

Open House every Saturday
10:00 AM to 2:00 PM
Last Saturday every month is
Swapmeet Day

W7DK 2024 OFFICERS AND COMMITTEE LEADERS

EXECUTIVE COMMITTEE:

President:	Mike Mikuchonis W7XTZ
Vice President:	Adam Barbera W2NCC
Secretary:	Gary McAdams WG7X
Treasurer:	Steve Dightman AF7YD

BOARD OF DIRECTORS:

Board:	Mike Drorbaugh W7MKE
Board:	Paul Matney W7PFU
Board:	Doug Schafer AD7DG
Board:	Red Cranefield WB7EC
Board:	Phil Pia K7PIA

KEY COMMITTEE CHAIRPERSONS:

Membership:	George K7GRS/Mike W7XH
Salmon Run:	George K7GRS/Mike W7XH
Infotech/IT:	Randy WB4SPB
HF Operations:	Phil K7PIA
Facilities:	Adam W2NCC
Property Mgmt.	Red WB7EC
Museum:	Dan KD7SV
Planning:	Manny AD7MA
POTA:	BJ WA7WJR
General Meeting:	Dave W7UUU
Bark layout & Editor:	Dave W7UUU
Assistant/Copy Editor:	Anne N7ANN

Contact Officers: *Their Call Sign* @W7DK.org

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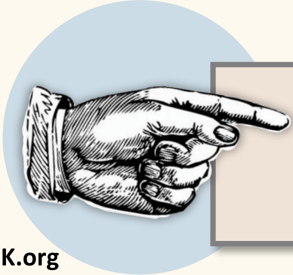
But don't stop there! Each issue is *50 or more* pages of fun and cool stuff to explore! Scroll on!



HAVE A SUBMISSION FOR OUR NEXT ISSUE?

loggersbark@gmail.com

PRESIDENT'S CORNER

Monthly ruminations from our President

Mike Mikuchonis
W7XTZ

HELLO GANG! This is Mike W7XTZ, your president. Happy New Year to all and I hope you had a wonderful Christmas and or holiday season. Isn't it funny that the seasons go by faster and faster as we age? When we were kids, birthdays, Halloween and Christmas seemed to take FOREVER to arrive! But back to school came all too quickly, LOL!

Another year has passed by and we sadly say goodbye to some radio club friends who are no longer with us. When you are at the clubhouse be sure to say hello to the older members, even if you don't know them very well. You would be surprised at the knowledge that these old timers have; they just might have a solution for your problem or know of a different way you can approach your project.

When I'm at the clubhouse, I can feel it humming with activity: equipment being tested, repairs and mods taking place, discussions about house maintenance, and discussions about radio operations. There's usually a couple of operators in the upstairs HF room making interesting contacts on different modes while numerous intrigued spectators watch on. It's not all about the doughnuts!

Not much happens outdoors during this time of year but our POTA group has been regularly setting up stations all over the south sound. Be sure to check out the Bark and the website to find out "where are they now". Maybe you want to participate but don't want to operate. You can help set up and haul equipment. Or maybe you'll go somewhere to a mountaintop or a park near you. We'd like to hear about your POTA or SOTA DXpedition! Just send an email to the editor with your story and a photo!

Well, I don't want to bore you as others are more well spoken than I. See you at the clubhouse so I can do my favorite thing: chat with the members. Until then…

73! de Mike W7XTZ

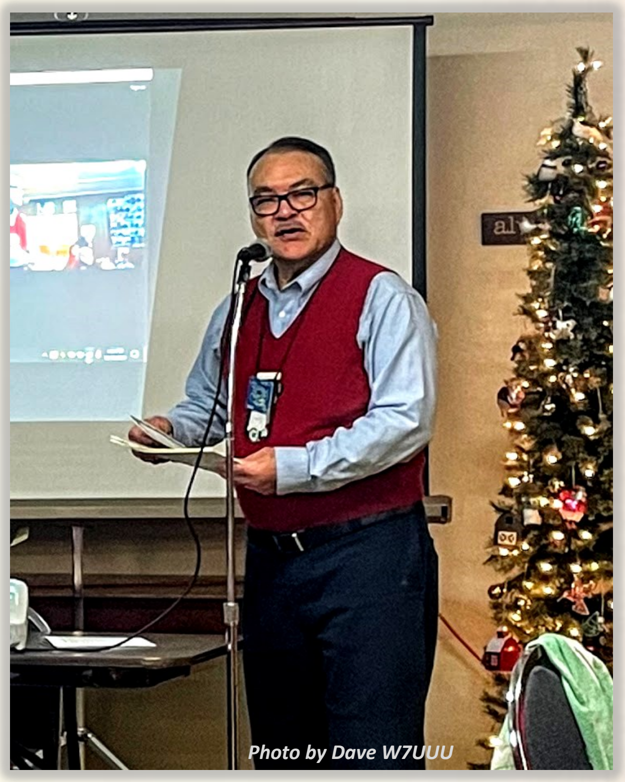


Photo by Dave W7UUU

President Mike W7XTZ preparing to hand out certificates at the 2023 Awards & Holiday Banquet

FROM THE DESK OF THE VP

Adam Barbera
W2NCC

Insights from our Vice President

HAPPY NEW YEAR from the office of the Vice President! As we bid farewell to 2023 and welcome 2024, we have many reasons to celebrate and look forward to the new year. The Radio Club of Tacoma has been growing steadily, with more than 320 members in the past 12 months. We are delighted to have such a diverse and enthusiastic group of ham radio operators, who share a passion for communication, exploration, and learning.

One of the highlights of 2023 was the marked improvement of the band conditions, especially on 10 and 20 meters. Many of us enjoyed making contacts with stations from all over the world, using various modes, often at very low power. Some of us even participated in contests and special events, such as the ARRL 10 Meter Contest, the CQ World Wide DX Contest, and Salmon Run.

We also had fun experimenting with digital modes, such as FT8, and RTTY. Also, in 2023 the club welcomed a new Icom IC-7610 transceiver. The IC-7610 is a state-of-the-art SDR radio that offers many features and advantages for DXing and contesting. Operating the IC-7610 is easy and exciting.

In 2024, we plan to continue our activities and offer more opportunities for our members to enjoy ham radio. Here are some of the events that we have in store for you:

Monthly Meetings: We meet on the second Wednesday of every month at 7:00 PM in the clubhouse and on Zoom. Each meeting will feature a guest speaker or a technical presentation. The meetings are open to everyone, so feel free to invite your friends.

Saturday Morning Open house: Every Saturday the clubhouse is open from 10am until 2pm. There are always complimentary coffee and donuts, and the clubhouse is open to everyone—including non-members!

We have more exciting plans for 2024, including contesting workshops. These will be workshops teaching hams who may not be familiar with this aspect of amateur radio the basics of how to work a radio in an HF contest, and what “radio sport”, as it’s called, is all about.

Additionally, we will have workshops dedicated to using the club’s HF equipment to contact special event stations, was well as guest speakers for the 4th Wednesday activity night.

W7DK will also be hosting POTA events around Western Washington. We will also continue to support our local emergency services, as well as promote ham radio to the general public. We hope that you will join us in these activities and make the most of your ham radio hobby.

I hope that you are as excited as I am are for the new year. I look forward to seeing you at our events and hearing you on the air. Thank you for being a part of the Radio Club of Tacoma. 73 and Happy New Year!

Adam W2NCC
Vice president

SECRETARY'S REPORT

W7DK Secretary—Gary WG7X

HELLO AGAIN club members… If you're reading this, it will be obvious that the Loggers Bark has a new editor now!

We, the members of the Radio Club of Tacoma, can look forward to an interesting publication from Dave W7UUU. Let's all welcome him to his new job for the club.

Speaking of new jobs, I have also moved on to Club Secretary, a job that I will be following in Mike, W7MKE's shoes. Those are going to be big shoes to fill. This job, Secretary, is complicated, with many aspects and nuances that I was not fully aware of until just recently!

Hopefully, I won't ruin the club as I learn the ropes…

Bear with me, and I'll do my best to fulfill the requirements.

So, we do have another year to look forward to. do many of you make new year's resolutions? I don't, mostly because I usually fail to do them and so do many other people.

Here are some that you might consider. Some may be easy, some not so much!

- *Become active* in the club's activities such as Field Day, Salmon Run, and Straight Key Night.
- *Vote for officers* when they are up for election or even volunteer yourself to be an officer.
- If being an officer is too much, *get involved in* one of the many activity committees.
- At home, try to *get on the air* more often!
- *Improve* your antennas, shack equipment or maybe even get a new rig.
- *Build something*. Antennas, QRP rigs, station furniture etc., etc.
- *Try a new mode!* Any mode that would be a new one for you.
- *Come by the clubhouse* on any given Saturday and work the "Mighty W7DK"!
- *Attend a meeting* either in person or via ZOOM.
- *Visit a club member* who may need assistance in something; maybe they're house bound or disabled. Anything that will help them get on the air or even just visit.

Those are just a few of the ideas that I came up with, I'm sure that you folks can come up with more ideas. Let's get radio active! No, not in a bad way, (radioactive!) just get on the air…

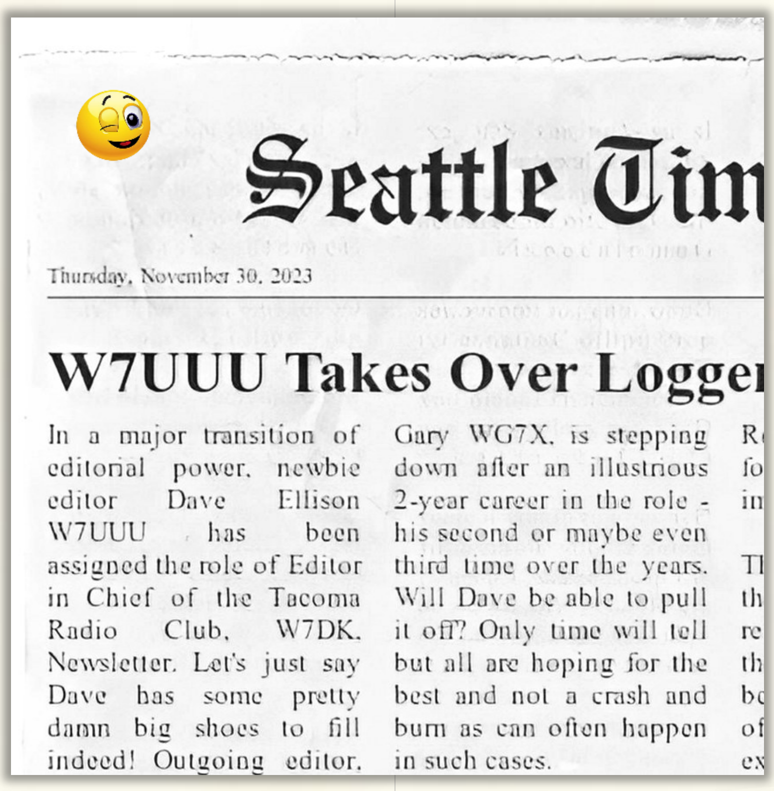
That's about it for this edition of The Loggers Bark. See you at the clubhouse!

73 Gary WG7X

-Secretary, Radio Club of Tacoma

W7UUU
FROM THE EDITOR'S DESK

WELCOME TO 2024! Hard to believe it's another new year… yikes! The sure seem to by faster every year, don't they? And starting off this year, after the wonderful work that Gary McAdams, WG7X did as editor of the Bark for two years, I'm very honored to be your new editor for the months and perhaps years to come. As I'm sure you've noticed by now, there is a whole new look and feel to the Bark… I truly hope you like it. I listened to a lot of members, and assimilated all the comments I could regarding what folks might want to see in a new "screen viewing-only" Logger's Bark instead of the former print-friendly hybrid that It was before. Of course you can still print out select pages of interest including a special feature or two you will discover. I've also opted for a limited Table of Contents – showing only the top items. The rest of the publication is intended to be more of a "magazine experience" where you simply thumb through the pages, so to speak, and see what there is to discover. CQ Magazine is now history…. along with 73 and all the others except QST. But The Logger's Bark is here to help!



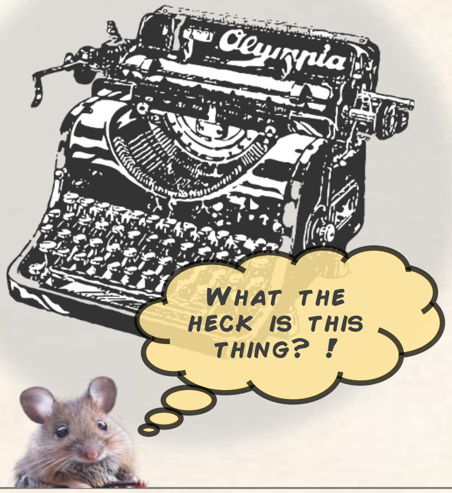
Seattle Tim

Thursday, November 30, 2023

W7UUU Takes Over Logge

In a major transition of editorial power, newbie editor Dave Ellison W7UUU has been assigned the role of Editor in Chief of the Tacoma Radio Club, W7DK. Newsletter. Let's just say Dave has some pretty damn big shoes to fill indeed! Outgoing editor, Gary WG7X, is stepping down after an illustrious 2-year career in the role - his second or maybe even third time over the years. Will Dave be able to pull it off? Only time will tell but all are hoping for the best and not a crash and burn as can often happen in such cases.

I've been a proponent of desktop publishing since it first came about in the 1980s and a MS Publisher power user for many years. I've been the creative force behind a great many publications over the years, from brochures to catalogs to newsletters and even full-on books. So this is all a natural environment for me. I really look forward to providing fun and enlightening content every month. I've brought in club members as regular contributors, as well as sourced outside content creators happy to share with our club. Please shoot me an email for the good or the bad and let me know what you think. 73! Dave W7UUU


Olympia
WHAT THE HECK IS THIS THING? !

THE MAILBAG

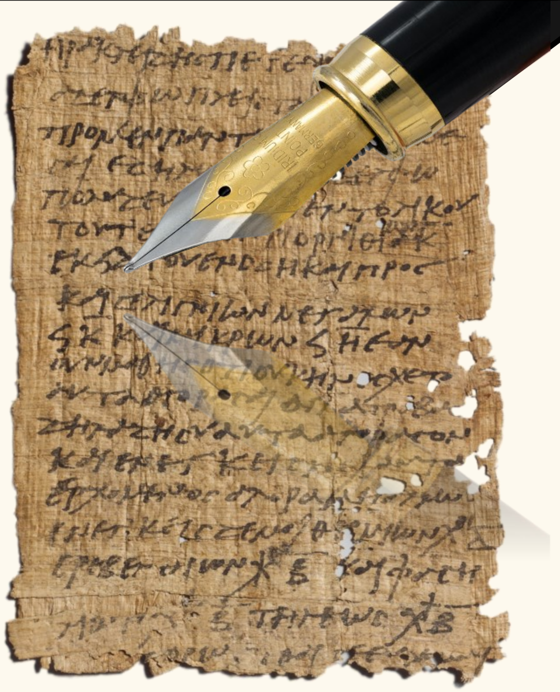
THE RCT MAILBAG

As your new Editor in Chief of the Logger's Bark, I'd love to hear feedback from members.

This is the place we'll post your comments about most anything—the "Voice of the Members" page.

If you have any commentary about most anything in amateur radio today and about the W7DK club in particular or the Logger's Bark, we'd love to receive your feedback.

Just email your letters and comments to LoggersBark@gmail.com and you will see your letter on this page in a future edition.



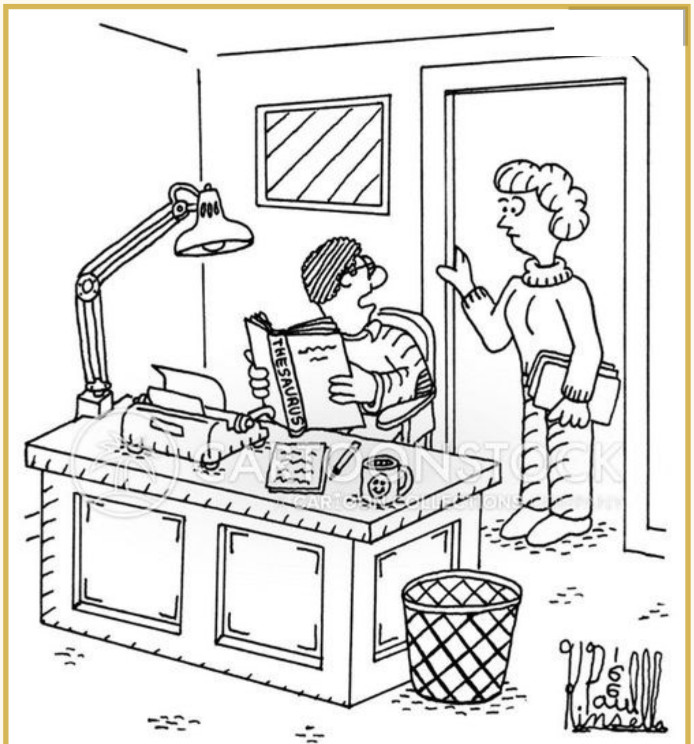
Be sure to read all the sections and learn what the new format is all about.

Thanks for reading!

Dave W7UUU
Editor in Chief with a Slew of **Cub Reporters** in tow

Bits and Bobs

The term "Cub Reporter" dates to the mid-1800s, during an era when most journalists learned their craft as apprentices, often beginning as copyboys. Because of their youth, they were called Cubs as in young bears, and the term "Cub Reporter" had a nice ring to it that stuck throughout the 19th into the 20th centuries. The bear lobby took offense in the early 2000s and the term has since been largely abolished



SWEETIE! I'M WRITING A LETTER TO THAT EDITOR GUY... W7UUU ... WHAT'S A GOOD EUPHEMISM FOR A CLOSED-MINDED, INBRED LITTLE TOOL?

FOSDEM 2024 CALL FOR PARTICIPATION: SOFTWARE DEFINED RADIO & AMATEUR RADIO DEVROOM

FOSDEM (Free and Open Source Developer's Meeting) is a yearly conference that this year will take place in Brussels, Belgium on 3 - 4 February 2024. This conference will also feature a track on FOSS-powered radio, and there will be a combined Amateur Radio and SDR Devroom.

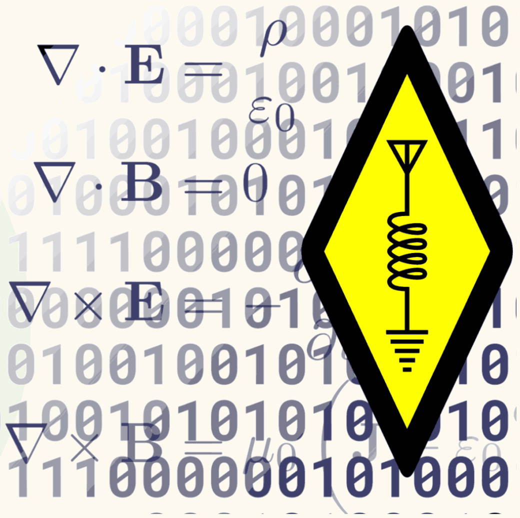
FOSDEM have issued a call for participation and have noted that slots are still open, so please submit any proposals for talks now if you are interested in presenting. The recommended topics include:

Topics discussed in the devroom include, but are not limited to:

- SDR frameworks and the tools that make them useful
- New SDR-based developments in ham radio modes
- Cellular/telecom software
- Amateur radio operator software tooling
- Free / Open radio hardware
- Wireless security research
- Entertaining wireless hacks
- SDR & ham radio in mass and higher education
- Satellite, spacecraft and interplanetary communication

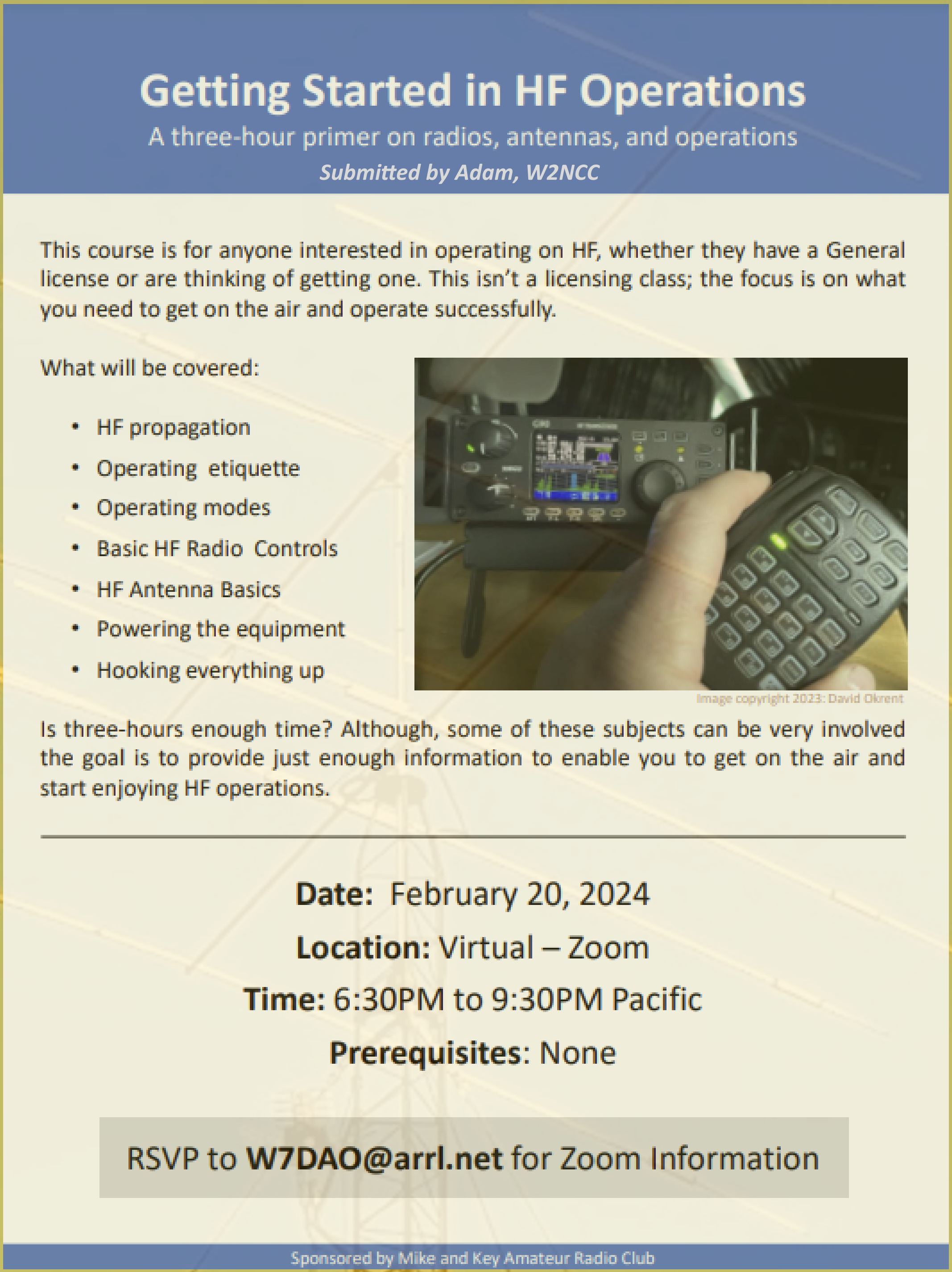
Software-Defined Radio is the technology of enabling radio signals to be processed and generated algorithmically, typically within general purpose processors, but also within FPGAs and GPUs; Free and Open Source (FOSS) Software Radio allows these algorithms to be inspectable and improvable. With the advent of ubiquitous IoT, sky-filling satellite mega-constellations and 5G/6G as standards designed with commercial Software Radios in mind, wireless is an exploding field of interest in the FOSS realm.

Ham Radio, also known as amateur radio, is more than just a hobby orbiting the usage of radio communication – it's a passion that merges the realms of electronics, human interaction, and communication. At its core, ham radio is about establishing connections: with people, with technology, and with the world at large. It is a free and open community effort at heart!



Contact FOSDEM:

Mailing List: discuss-gnuradio
Matrix: #gnuradio:gnuradio.org
IRC: #gnuradio on libera.chat



Getting Started in HF Operations

A three-hour primer on radios, antennas, and operations

Submitted by Adam, W2NCC

This course is for anyone interested in operating on HF, whether they have a General license or are thinking of getting one. This isn't a licensing class; the focus is on what you need to get on the air and operate successfully.

What will be covered:

- HF propagation
- Operating etiquette
- Operating modes
- Basic HF Radio Controls
- HF Antenna Basics
- Powering the equipment
- Hooking everything up

Image copyright 2023: David Okrent

Is three-hours enough time? Although, some of these subjects can be very involved the goal is to provide just enough information to enable you to get on the air and start enjoying HF operations.

Date: February 20, 2024

Location: Virtual – Zoom

Time: 6:30PM to 9:30PM Pacific

Prerequisites: None

RSVP to **W7DAO@arrl.net** for Zoom Information

Sponsored by Mike and Key Amateur Radio Club

Heard some ham radio WORLD news? Send it in!

HAM RADIO WORLD NEWS

Amateur radio events from around the world

WEB

W7P
2024
1929 13" PLUTO DISCOVERY ASTROGRAPH
STANLEY SYKES
DESIGN AND
CONSTRUCTION
NORTHERN ARIZONA DX ASSOCIATION

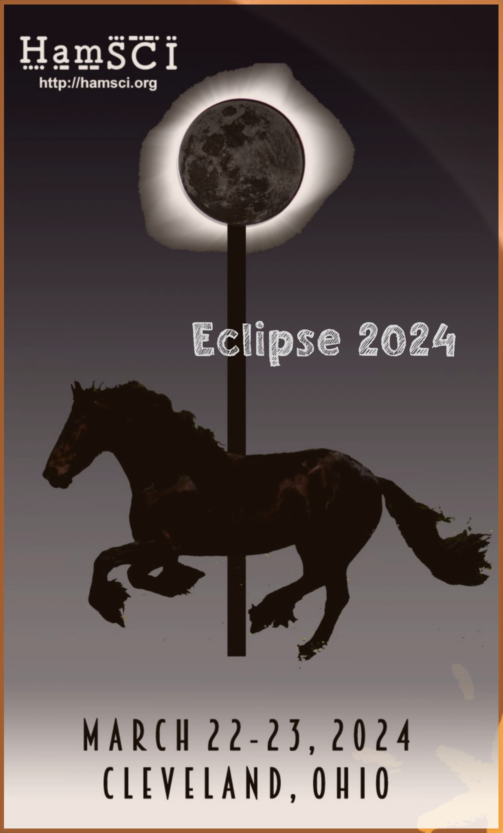
PLUTO DISCOVERY ANNIVERSARY

W7P Special Event Station!

Year Four of the 100th Anniversary 10-Year Countdown Special Event 94th Anniversary is 10-18 February, 2024

The Northern Arizona DX Association will be continuing with year four of the 10-year special event countdown to the 100th anniversary of the discovery of Pluto by Clyde Tombaugh at Lowell Observatory in Flagstaff, Arizona. This annual 9-day event is held each February through the 2030 anniversary. This year's event will take place February 10-18, 2024 (UTC).

The annual QSL cards, the event certificate, and more can be found at www.nadxa.com


HamSCI
http://hamsci.org
Eclipse 2024
MARCH 22-23, 2024
CLEVELAND, OHIO

Come join HamSCI at its seventh annual workshop! The workshop will be held March 22-23, 2024 at Case Western Reserve University in Cleveland, OH and seeks to bring together the amateur radio community and professional scientists. Anyone interested in this workshop is invited to join.

The workshop will focus on the theme of **Alignments** - between the Sun, Moon and Earth; between collegiate amateur radio recreation and STEM curriculum; between data collection and analysis; between professional and citizen science. We are preparing for the solar eclipse of 8 April 2024 www.hamsci.org

Heard some ham radio WORLD news? Send it in!

Pluto & Solar Eclipse photos
by NASA.gov

email loggersbark@gmail.com

ARRL NEWS & VIEWS

What is the League up to this month?

BREAKING NEWS

MARK THARP KB7HDX NEW NW DIV. DIRECTOR

DATELINE: JANUARY 23, 2024

From the desk of Mark Tharp, KB7HDX:

“Hello Northwestern Division,

As many of you know, but some may not, at the last ARRL BOD meeting our very own Director Ritz was elected to the position of 2nd Vice President. As result of that move, I advanced to the Director chair. But that was not enough for the other board members as they also elected me to the seat on the ARRL Foundation that Mike occupied.

I ended up with two new jobs all within 10 minutes. It is an honor to hold both positions.

Needless to say I’m running a bit ragged this week but things should calm down soon.

Mike and I are planning to put out another newsletter early next month and we will have more information from the meeting.

A snapshot was sent out to all members so I’ll assume most of you have read that. If not, it can be found here: http://www.arrl.org/member-bulletin?issue=2024-01-21

I would like to thank Mike for all his hard work the past five years. He was a great Director, and is a great friend.

For you current Assistant Directors, I'll be reaching out to you all later this week as well.

One other outcome of the elections resulted in a vacant Vice-Director position. I do not have a timeline on when this position needs to be filled; however, I would like to find a person sooner rather than later. I have talked to a few about this already but I don't think it would be fair to not ask all in the Division. This is our normal election year so the position would be initially appointed for the remainder of this year but we will have an election this fall.

Look for more next month as Mike and I both take some time to settle into our new roles.

As always, email is the best way to contact me if you need to.

73,
Mark, **KB7HDX**

Mark J. Tharp
KB7HDX
ARRL NW Div. Director
kb7hdx@arrl.org “

ARRL NEWS & VIEWS

What is the League up to this month?

ARRL The National Association for Amateur Radio® responded to the Federal Communications Commission's (FCC) request for comments on removing the symbol (baud) rate restrictions that apply to data communications on the LF bands and the VHF and UHF bands below 450 MHz. The FCC also requested comments on the bandwidth limits applicable to those bands.

The FCC's action follows their 2023 decision to remove the symbol (baud) rate limits on the 160- to 10-meter amateur bands. Those limits were replaced with a 2.8 kHz bandwidth limit, a move ARRL had long advocated for.

The FCC's Further Notice of Proposed Rulemaking sought comments on updating the other amateur bands on which its symbol (baud) rate limits continue to throttle faster data rates. The subject bands are the LF bands (2200 and 630 meters) and the VHF and UHF bands below 450 MHz. In its comments, ARRL strongly agreed with the FCC's proposal to remove the symbol (baud) rate limits on the remaining bands.

ARRL's comments also noted that CW operation is protected in the lower 100 kHz of the 6- and 2-meter bands and will continue to be so protected, but otherwise, all modes are permitted in the remainder of the subject VHF and UHF bands with only the data modes subject to bandwidth restrictions below 450 MHz that vary by band. The bandwidth restrictions uniquely applicable to data modes have resulted in the other modes being permitted to use many times the bandwidth of data modes in an intermixed fashion determined by those using the bands. For the data modes, however, the limits have limited experimentation with techniques already in use in other countries on amateur VHF and UHF bands.

ARRL concluded that the FCC should also remove the bandwidth limits that apply uniquely to the data modes on the subject bands, and instead, amateurs rely on voluntary band plans and local agreements, as they already do with regard to the mix of the other modes ranging from Morse code (CW) signals of 50 Hz or so (depending upon speed) to amateur television that employs signals of 6 or more MHz. ARRL also noted that the limited propagation range on the subject bands enables local cooperation that is not possible on the HF bands where propagation is such that signals can cover the globe.

The bands addressed in this rulemaking are:

- **135.7 – 137.8 kHz** (2200m)
- **472 – 479 kHz** (630m)
- **50.1 – 54 MHz** (6m)
- **144.1 – 148 MHz** (2m)
- **219 – 220 MHz (**1.25m digital)
- **222 – 225 MHz** (1.25m)
- **420 – 450 MHz** (70cm)

[Comments to the FCC now closed]

Comments link:
https://www.arrl.org/arrl-guide-to-filing-comments-with-fcc.

[Used with permission ©ARRL –*ed*]

ARRL NEWS & VIEWS

What is the League up to this month?

W1AW

The Bellevue Amateur Radio Club and the Science Club at Yates Illuminates teamed up to offer the youth in Omaha, Nebraska, with an opportunity to get on the air for ARRL Kids Day.

The event occurred on Saturday, January 6, 2024, at Yates Illuminates, a former elementary school that is now a culture and community center. Amateur radio operators Dudley Allen, KD0NMD; Terry Gampper, N0BXQ; Frank Jozwiak, KB0EOR, and Mike Terneus, WB0BEE, served as volunteer operators and were extremely patient coaches who nurtured the kids' curiosities of talking on the radio. Dozens of youths as young as 4, as well as young-at-heart Bob Hutton, 91, used the event call sign to talk to amateur radio operators across the country and around the world.

Parents were impressed with Kids Day. One parent said, "The event organized by the Yates Illuminates Science Club was a perfect blend of education, technology, and community spirit. My kids were thrilled to delve into the world of amateur radio, thanks to the expert guidance of the Bellevue Amateur Radio Club. They learned about radio technology and how to contact other young radio enthusiasts across the country. This hands-on experience in communication technology was not only fun but also incredibly educational."

The final highlight of the day came as each child received their certificate of completion. Africa, Asia, Europe, and North America were all represented as the country of birth or the original nationality of the youth participants, and they talked with amateurs as far away as England and Canada.

ARRL Kids Day is already planned for next year, and the Yates Illuminates Science Club will continue to help youth learn the basics of electrical circuits, electronics, and radio propagation, as well as how to make homebrew antennas. Foxhunts, the integration of a course in radio, and other applied scientific learning opportunities (such as wildlife tracking and rescuing, aviation and space research, and communications) are also planned.

More stories and photos of ARRL Kids Day can be found on the ARRL Contest Soapbox.

[Text and photos used with permission ©ARRL –*ed*]

ARRL NEWS & VIEWS

What is the League up to this month?

2023 [WAS] A REMARKABLE year for amateur radio. There were many noteworthy opportunities for hams to use their license privileges for the greater good. An annular solar eclipse saw radio amateurs engaging in projects of scientific research about our ionosphere, devastating firestorms gutted entire cities and saw Amateur Radio Emergency Service member-volunteers rise to activate, hurricanes threatened life and property, bicycle races spread across the desert necessitating robust communications provided by hams, and high school students led and executed contacts with the International Space Station. Many amateur radio operators stood to serve in ways that made headlines, and all of them were volunteers.

Still, tens of thousands of others did work that never made the pages of *QST*, didn't become the lead story on the local news, and didn't become fodder for online forums. Perhaps it was the ARRL VE who administered tests, welcoming the next generation of hams into the hobby, or the National Traffic System net manager who handled traffic from hams checking in. It could've even been the mentor who took the time to show a learner how to solder. These are the unsung heroes of the Amateur Radio Service -- these are the volunteers.

ARRL has nearly 60,000 volunteers within its membership, without whom it could not function. They are the lifeblood of this hobby. ARRL designated 2023 as the Year of the Volunteers to recognize their efforts, encourage new prospective volunteers to follow their lead, and call existing volunteers to reach one rung higher on the ladder of service. The Volunteers On the Air (VOTA) operating event has been popular among hams, with some operators making nearly 30,000 QSOs throughout the yearlong activation.

A young man from north Texas emerged as a leader. Sam Lovett, KI5RSV, is just a teenager but has been awarded the 2023 Hiram Percy Maxim Memorial Award for his success with developing interest in amateur radio among his peers. He leads a youth net and has been instrumental in building a strong ham culture in his Trail Life USA troop. A video interview with Sam will be featured in the February 2023 digital edition of *QST*.

Lyn Alfman, N8IMW, of Norwich, Ohio, was honored for her volunteer work in the public information space. She received the 2023 ARRL Philip J. McGan Memorial Silver Antenna Award. The proclamation issued by the ARRL Board of Directors says that Lyn "exemplifies the skills and depth of understanding [needed] to convey to media outlets the fascinating world of amateur radio."

ARRL's George Hart Distinguished Service Award honors the work member-volunteers put in to use their license privileges to serve others. Jo Ann Keith, KA5AZK, of Diana, Texas, is the 2023 recipient.

Jo Ann is the net manager of the 7290 Traffic Net, a public service traffic net that has been in operation since 1953. She has a long history of volunteer work, dating back to her youth when she served as a candy striper. Like tens of thousands of others, Jo Ann uses amateur radio in the spirit of service.

These are just a few stories that can be told from the Year of the Volunteers. There are so many other stories out there, and we encourage you to tell your own.

While the Volunteers on the Air event closes on December 31, 2023 at 2359 UTC, the spirit of this year will continue as long as there are hams standing to serve others through amateur radio.

From all of us at ARRL, thank you!

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BOARD OF DIRECTORS

W7DK

Minutes from this month's meeting

NOTE: Other than graphical formatting to fit the allotted space, Minutes are not edited verbally in any way including spelling, grammar, etc. *-ed.*

Radio Club of Tacoma
Board of Directors Meeting Minutes
(01/03/2024)

Meeting called to order at 1903 PST

Officers and Directors Present

x	President	Mike Mikuchonis W7XTZ
x	Vice President	Adam Barbera W2NCC (Via Zoom)
x	Secretary	Gary McAdams WG7X
x	Treasurer	Steve Dightman AF7YD
x	Board	Mike Drorbaugh W7MKE
x	Board	Paul Matney W7PFU
x	Board	Doug Schafer AB7DG
x	Board	Red Cranefield WB7EC
x	Board	Phil Pia K7PIA (Via Zoom)

Quorum? YES

Silent Key or Illness?
Nick, K7MO is back at home recovering.
P.J. N7PH passed 12/11/2023. No services planned at present.
Raider NS7SN passed 12/05/2023.
From Membership: we were informed that Paul W7MSG expired in 2018. Forwarded from Bob K7MXE to membership.
Also from membership: Barbara Osborne W7UYL Passed 2022-11-28 She used to be the manager of the Loggers Certificate back in the day 1957 to 1997. This was passed to Nick K7MO and then Dave W7UUU.

Approval of Minutes

Minutes of December 6th BOD meeting approved as circulated without objection.

Secretary's Report (WG7X)

New Secretary, Gary WG7X takes on the job of secretary from Mike W7MKE this month. Mike is not going away, just changing jobs to be a BOD member. Mike left Gary (new secretary) with some very big shoes to fill. Thankfully, Mike will still be around to keep Gary on track!

Usual membership renewals, PO Box renewal. Etc. etc..
Review and update Signature cards at US Bank.
Usual junk mail interspersed with renewals, PO box renewal.

(Continued on page 16)

BOARD OF DIRECTORS

Minutes from this month's meeting

(Continued from page 15)

Treasurer's Report (AF7YD)

Review Crawford Mountain repeater lease. (Already sent to Treasurer)
Committee chairs to submit annual budgets to Treasurer.
Insurance will be updated when the new proposal arrives.

Treasurer Steve AF7YD brought draft Financial Report for perusal of the board. Steve showed that expenses for 2023 exceeded income by approximately $*** dollars, so we were balanced budget for the year. Steve will continue to review and correct the various financial reports for the February BOD meeting.
Reviewed income vs loss reports. Steve began a presentation for the process to discuss policies for submitting committee budgets to the BOD.

Doug AB7DG asked about the progress in getting Anne N7ANN ready for her Assistant Treasurer job. Steve said that they are in progress with this. It has been delayed due to being very busy over the holidays and year-end activities.

Steve continued reviewing the Budgets & Expenditures taken from the Bylaws. Line by line discussion ensued, which are all covered in the attachments to this report.
Mike W7MKE suggested treasurer should be given a set number in dollars for the reserve that the club needs to maintain.

Adam W2NCC suggested that the budget process should begin in October of 2024 for the 2025 season. Discussion followed.

Dan KD7SV suggested / asked that we have a form (which we have) for submitting a budget. The form already exists and can be used. It is available on the NAS. (Network Attached Storage). The form is not that easy to find at present, but it will be made more available in future. Mike W7XH has already addressed the form and sent it to the requesting people.

Long Range planning was discussed. Will eventually cover future planning out to three years.

Public Service and Funding plans. Reserve funds supporting the RCT are necessary to support the purposes of the club. Things like Core Expenses (utility bills) Activities (Field Day and POTA) Optional expenses (New Equipment possibly).

Mike W7MKE asked the Treasurer about the levels needed as reserve for the next three years. Suggested either $*** or $***
Discussion settled on $*** Mike mentioned $*** expenses last year.

Adam W2NCC wanted to suggest single page forms for budget submittals and having all those submitted budgets accessible to the general membership. 2023 expenses were in the $*** range.

Mike W7XH will send blank budget submittal forms to Dan KD7SV and B.J. WA7WJR. They did not have those forms to use to submit. Forms were sent on Thursday 01/14/2024.

Discussion continued with budget submissions between Adam W2NCC and Mike W7MKE about knowing our reserve and the ability to forecast budgets.

(Continued on page 17)

BOARD OF DIRECTORS

Minutes from this month's meeting

(Continued from page 16)

Mike W7XH asked BOD to set a deadline for budget submittals in future. Discussion continues about "Extraordinary" or normal expenses versus capital expenditures. Budget Items more than $**** will still need approval of the membership.

Dan KD7SV asked whether the $*** spent on facilities was included in the 2023 funds expenditures. Adam W2NCC replied in the affirmative. Adam then continued that he submitted a request for furnace replacement in the future range of expenses. This was covered in his current facilities budget request.

Mention made by Doug AB7DG for approval of continuing expenses budgets here and now.
Mike W7MKE went on to ask again for a reserve level of funding to be set and approved. He suggests $65k as a hard bottom reserve. Then Steve will put together a spreadsheet including the various committee budget requests.

Mike made a motion that our reserve is not to be drawn down below $*** for 2024. Excluding core expenses of approximately $12k. Much discussion followed. Roll call vote was made of all Officers and BOD members. Motion approved.

Motion made by Mike W7MKE that we consider approval of all budgets that are not more than $5k and discuss all budgets that are more than the $5k limit. Motion carried after discussion.

Committees that are more than the $*** limit are HF, Tower and Facilities.

President appointed Red WB7EC, Mike W7MKE and Dan KD7SV to an ad hoc committee to discover / find a committee chair for EMCOMM committee.

All budget proposals are attached to this report.

Budgets passed by the BOD are:

Library: $*** (subscriptions and acquisitions).

IT: $*** (Brother printer parts, Domain names and website expenses, replacement of storage devices for Network Attached Storage).

Repeaters: $*** (Technical help, parts).

Membership: *** (Office Supplies and Postage for multiple mailings).

RF Lab: $*** (basic tools).

Smaller budgets expected to pass w/o objections are for:

Museum

POTA

Budgets needing review and prioritization prior to approval. Listed are major items in those budgets.

(Continued on page 18)

BOARD OF DIRECTORS

Minutes from this month's meeting

(Continued from page 17)

HF Committee: $*** (new amplifier & auto tuners, band pass filters, IC-7300).

Facilities Management: $*** (Furnace, garage repairs, weed whacker, shelving, lighting, Security).

Tower: $*** (Galvanize the tower).

Committee / Reports

Membership (W7XH/K7GRS)

Mike W7XH has sent out reminders to lapsed members that had been sent out to members previously and received some pushback about supposed lack of feedback or encouragement from someone who had let his subscription go

Doug AB7DG read part of his recent message to Mike W7XH suggesting that new members be sent information about club activities and membership privileges. The secretary has also received an email on this subject from the ARRL Division Section Manager Monte W7FF from a fellow that had elevated his complaint to him, our SM. Might be the same fellow who complained to our other staff members. Call sign redacted for obvious reasons.
Mike is working with the member to smooth things over. Mike reports that he purged the membership roster, resulting in 250 current active members with 246 voting members currently down from 331 as of close of business 2023.

Salmon Run ended with $*** pledge donations and $*** of in-kind donations. Salmon run is finished for now. Some more funds might be pending.

Membership Committee submitted budget. Budget approved.

Library (AD7AV)

Training (AD7AB)

Class this upcoming weekend 01/07/2024 – 01/08/2024
No budget submitted for the training committee.

Camp Quest NW. On Schedule, going as planned.

VE (AC7WW)

Friday, December 8th your VE Team traveled South to JBLM. We tested eight candidates. Results were six new Technicians, one General and one Extra.

(Continued on page 19)

BOARD OF DIRECTORS

Minutes from this month's meeting

(Continued from page 18)

Thanks to the following for their service and time.

Mike W7XH, Rob K7TGU, Steven AI7QM

We had a huge turnout Tuesday December 12th, 2023, at the clubhouse. One candidate passed element 3 to upgrade to General and another candidate passed element 4 to upgrade to Extra.

Thanks to the following for their service and time.

Leonard KA7NWF, Rich KK7VH, Mike W7XH, Rob K7TGU and Stephen AD7AB.

The next scheduled test session is Tuesday, January 9TH, 2024.

Info Tech and Website (WB4SPB)

All systems are Nominal.

HF Operations (K7PIA)

Tower (K7MO)

Budget under review. Work still in wait status as Nick K7MO continues recovery phase. Adam W2NCC will fill in / assist in the meantime.

Repeater Ops (N7OMS)

Facilities Management (W2NCC)

Property Management (WB7EC)
$*** was made in the last month. The Property Disposal committee also has no current budget request.
Two items TS-520 and Service monitor available for sale. Permission to sell granted by President Mike W7XTZ.

Mike & Key table?

PMT committee.
Currently in process

Museum (KD7SV)

(Continued on page 20)

BOARD OF DIRECTORS

Minutes from this month's meeting

(Continued from page 19)

Weds Workshop (WB4SPB)

No subject decided on at present.

General Meeting (W7UUU)

The program is by one Tim Kulman, KD7RUS, from the Clark County Radio Club, on the planning and installation of an amateur radio tower system.

Unfinished Business

Mike asked Steve about the progress with getting funds into the money market. Accounts have some issues, but this is in process. Mike continued asking about it because of potential loss of interest funds if this is delayed too long.

New Business

New officers, Gary WG7X Secretary, Mike Drorbaugh W7MKE Board. An update report has already been filled out with the ARRL.

President to formally appoint new officers/ committee chairs? Blanket approval was given by Mike to all current committee chairs.

Review / Update Randy's edit of the RCT standing rules. Publishing standing rules to the public was considered and changes made to standing rules to remove possible data such as user ID's from the standing rules to conceal them from the public before putting the Standing Rules on the website.

Mike W7MKE made a motion to accept the changes to the public Standing rules and to publish them on the website once approved. Motion approved.

Activity Reports, Discussion Topics, Announcements.

POTA winter field Kitsap Memorial Park, Last weekend in January. Six folks will be there Saturday through Sunday operating. Also mentioned KE7YLJ's welcoming packet. Mike W7XH is generating that.

Adjournment at: 2120 PST

END OF REPORT

GENERAL MEETING
Minutes from this month's meeting
W7DK

NOTE: Other than graphical formatting to fit the allotted space, Minutes are not edited verbally in any way including spelling, grammar, etc. *-ed.*

Radio Club of Tacoma
General Meeting Minutes
January, 10th 2024

Officers and Directors Present

X	President	Mike Mikuchonis W7XTZ
X	Vice President	Adam Barbera W2NCC
X	Secretary	Gary McAdams WG7X
X	Treasurer	Steve Dightman AF7YD
X	Board	Doug Schafer AB7DG
X	Board	Phil Pia K7PIA
X	Board	Paul Matney K7PFU
X	Board	Red Cranefield WB7EC
X	Board	Mike Drorbaugh W7MKE

Meeting Called to Order at: 1901 PST

Flag Salute

Quorum (10% of membership required to "conduct business."

Quorum Yes.

Welcome and Acknowledgement of New Members and Visitors (Please introduce yourselves)

New member Jeff KK7PRJ, Visitor Tim KD7RUS program presenter. Good presentation.

Doc Spike Award: Presented by Mike W7XH to Paul K7OSS [*see section following these minutes – *ed*]

GENERAL MEETING

Minutes from this month’s meeting

Program (Dave W7UUU)

The program is by one Tim Kulman, KD7RUS, from the Clark County Radio Club, on the planning and installation of an amateur radio tower system. Tim did a fine job showing us how to do a proper installation of a crank up tilt over tower. His tower is three sections and goes up 50 feet.

Health and Welfare/Silent Key & Illness

Nick, K7MO is back in the hospital due to complications.

P.J. N7PH passed 12/11/2023. No services planned at present.

Raider NS7SN passed 12/05/2023.

From Membership: we were informed that Paul W7MSG passed in 2018. Forwarded from Bob K7MXE to membership.

Also from membership: Barbara Osborne W7UYL Passed 2023-11-28. She used to be the manager of the Loggers Certificate back in the day. 1957 to 1997. This was passed to Nick K7MO and then Dave W7UUU.

Secretary’s Report

Five or Six renewals, several bank statements, and some junk mail from realtor(s) wanting to buy the clubhouse.

Treasurer’s Report

Steve detailed many different amounts on the various accounts that need to be reconciled. Currently a work in progress. Details of reports are available on the RCT website at the conclusion of the analysis. Apparently there are /were some small discrepancies. Treasurers report in full should be in February.

Committee / Activity Reports

Membership (Mike W7XH)

Mike reports that he purged the membership roster on January 3rd, resulting in 250 current active members with 246 voting members currently down from 331 as of close of business 2023. Currently, 17 new members have been added to the roster, putting us at 267 members now.

Salmon Run ended with $10,228 pledge donations and $3,028 of in-kind donations. The Salmon run is finished when the final contributions have been received. That might continue into 2024.

GENERAL MEETING

W7DK

Minutes from this month's meeting

Training (Stephen AD7AB)

Training is ongoing with normally one training class each month as reported by President Mike W7XTZ. Camp Quest NW is going on this weekend, and they plan to take exams after the event. The training protocol that they use is different from what Stephen uses. 16 kids are expected to attend all of them who are high school age.

Dave W7UUU reports that 15 QRZ-1 Explorer handhelds have been donated through QRZ & Gigaparts.

Adam W2NCC suggested that letters of thanks be sent to the sponsors: QRZ and Gigaparts.

Club will provide training manuals and associated materials to the participants and will cover their exam costs.

VE Report (John AC7WW)

Tuesday, January 9th, 2024, your VE Team graded 29 exams from two sessions at the clubhouse. 11 candidates passed their technician exam, one candidate passed their Tech and General exams. one candidate passed element two, three and four to become an Extra.

Thanks to the following for their service and time.

Leonard, KA7NWF	Rich, KK7VH
Mike, W7XH	Phil, K7PIA

The next scheduled test session is Tuesday, February 13th. Time to be determined.

HF Operations (Phil K7PIA)

Phil reports for the month of January everything is working and ready for the weekend event. Reports that NAQP CW is this coming weekend. Some issues with the VHF/UHF vertical in the HF room. The beams for VHF/UHF are operational.

Repeater Operations (Al N7OMS)

No report. Comments made about low participation during nets.

IT Report (Randy WB4SPB)

Fourth weekend subject to be determined. IT All nominal.

Museum (Dan KD7SV)

Drake L4Bi is now functional. Will be released to the PMT committee for sale.

SKN turned out well, five pizzas consumed. Gave out six gift cards as rewards during the CW bingo game.

K3Y operations on the 8th of January 26 contacts made in one hour by Randy WB4SPB. Another K3Y event is coming up on the 16th on January 11 & 12. TS-520 is also almost ready to go to PMT.

GENERAL MEETING

Minutes from this month’s meeting

W7DK

Property Management (Red WB7EC)

No report.

Facilities Management (Adam W2NCC)

Several small projects are planned for 2024. Trying to keep the members off the ladders this year. Garage alarm and siding proposed. Shed alarm work is also in progress.

4th Wed. Night Activity (Randy WB4SPB)

Fourth weekend subject to be determined.

Bark Editor (Dave W7UUU)

New, improved Loggers Bark in progress, will be out in late January. Dave wants to make the newsletter a forward-looking publication. Everyone is looking forward to the new Loggers Bark.

Not related to the Loggers Bark directly, but Dave also gave a short Presentation on the Loggers Certificate that is given to members of the club and others who work at least ten members of the club. Gary WG7X is the current record holder with 300 members worked over the last 35 or so years.

Unfinished Business

Mike W7MKE reports that President has assigned Doug Schafer AD7BG as the chairman of an Ad hoc comittee chairman for a new EmComm committee.

Budgets passed by the BOD are:

President Mike discussed upcoming budget requests. We (RCT) are going to make annual budget requests necessary going forward.

Library: $*** (subscriptions and acquisitions).

IT: $*** (Brother printer parts, Domain names and website expenses, replacement of storage devices for Network Attached Storage (NAS).

Repeaters: $*** (Technical help, parts).

Membership: $*** (Office Supplies and Postage for multiple mailings).

RF Lab: $*** (basic tools).

Smaller budgets expected to pass w/o objections are for:

Museum

POTA

Budgets needing review and prioritization prior to approval. Listed are major items in those budgets.

HF Committee: $*** (new amplifier & auto tuners, band pass filters, IC-7300).

Facilities Management: $*** (Furnace, garage repairs, weed whacker, shelving, lighting, Security).

Tower: $*** (Galvanize the tower).

GENERAL MEETING

Minutes from this month's meeting

W7DK

Will notify membership 10 days ahead of the next general meeting because we need a quorum for approing budgets for 2024.

New Business

George K7GRS mentions comments from naysayers in recent messages sent to the club during the BOD meeting. George mentions that Clay Bermhalt Member #711 put positive comments on the Tacoma Chamber of Commerce website. Comments put the "Amateur Radio Club of Tacoma" in a positive light.

Show and Tell

President Mike asked Dan KD7SV to comment on the Boeing 767 in the background of his ZOOM page. Dan used to fly for UPS. Rockwell Collins radios on the plane made it easy to make contacts on HF while in flight. Dan flew those airplanes for over 20 years. Made mention of the plane being able to fly comfortably at over .8 Mach (600+ Mph –*Ed*)

Tuning and Traffic

Gary WG7X reported that he made 504 contacts on the January ARRL RTTY Round Up.

Announcements

BJ WA7WJR reports the winter field day event will be 27-28. If you plan to come it's at Kitsap Memorial state park. Please come on Saturday, not Sunday.

Adjournment

2055 PST

END OF REPORT

GENERAL MEETING

Minutes from this month's meeting

W7DK

THE DOCK SPIKE INSPIRATIONAL AWARD 2023

"This honor is awarded annually, in the memory Doctor F. Clifford Spike W7OS, an early member of the Radio Club of Tacoma whose long service and devotion to the club was the inspiration for the award. It is for the Club Members who: best represent the true spirit of Amateur Radio, inspire others to promote and insure the current and future success of the Radio Club of Tacoma and have devoted tireless efforts in support of Club operations.

Today's honoree has been with the club for twelve years. During that time, he has become a valued member of the club. He has taken an active roll in helping to get the club facilities in good shape. He is a member of PMT and has worked at the Mike and Key event. He is a servant leader. He might be found on a ladder, hammer or paintbrush in hand. Or in the garage sorting and inventorying donated goods. Perhaps, he will be creating presentations for visiting personnel. It would be hard to list all the work our honoree has done for the Radio Club of Tacoma.

This year, the Radio Club of Tacoma is proud to present the Doc Spike Inspirational Award to:

Paul Nosal K7OSS

Mike Isakson W7XH, 2022 Doc Spike Award recipient presents the 2023 award to

Paul Nosal, K7OSS

in support of the long-standing tradition of the prior recipient guiding the selection of, and the presentation to, the next year's recipient.

Congratulations to Paul for this long-standing honor of the Radio Club of Tacoma

AROUND THE CLUBHOUSE

Recent Photo highlights from the Clubhouse

Photo Bob K7MXE

Warren, NG7G, popped by the clubhouse to show off his badass new BMW 850 motorcycle

Photo Steve AF7YD

Stephen, AD7AB, standing at the very rear of the training room proudly oversees his eager students for the weekend's Tech Class training session

Photos Bob K7MXE

New parking lot gate all in and done—big thanks to Adam N2NCC, head of Facilities, for coordinating the project with a local contractor for the best possible outcome that will now last for years

Got pictures from the clubhouse? Send 'em in!

AROUND THE CLUBHOUSE

Recent Photo highlights from the Clubhouse

Pete, KC7YDW (left) confers with W7OS Museum Curator Dan KD7SV on getting an old Heathkit HR-10 receiver up to snuff

Leah, K7IPT, works the Canadian SSB contest from the Icom IC-7610 transceiver

Newly-elected club Secretary, Gary WG7X, hard at work at his desk in the Membership department

Chef Paul, W7PFU, hard at it whipping up chilidogs for the hungry clubhouse masses!

Got pictures from the clubhouse? Send 'em in!

All photos this page by Dave W7UUU

email loggersbark@gmail.com

AROUND THE CLUBHOUSE

Recent Photo highlights from the Clubhouse

VP Adam W2NCC works the new Icom IC-7610 during a recent contest

Doug AB7DG hanging out in the Doug DeMaw library on a bright sunny Saturday morning

Nolan, K7GBM, always with a smile to greet anyone visiting the clubhouse

Walt, WA7SDY, sells his wares at the "Last Saturday" mini Swap Meet in the clubhouse

Got pictures from the clubhouse? Send 'em in!

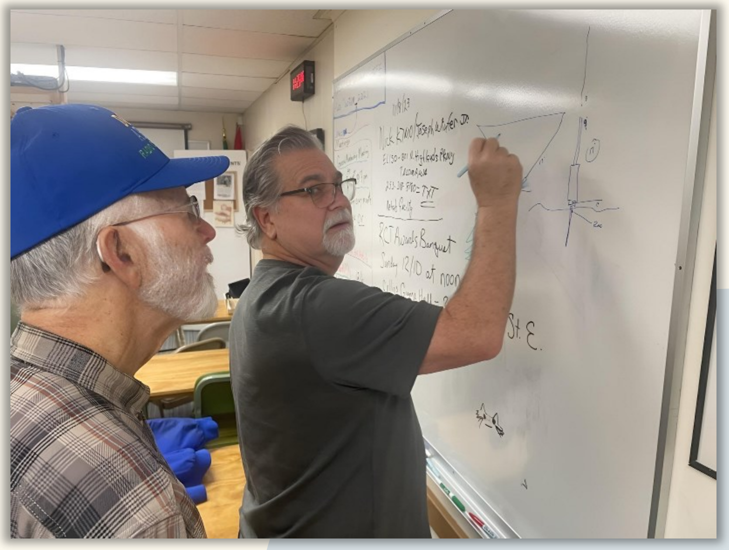
All photos this page by Dave W7UUU

email loggersbark@gmail.com

AROUND THE CLUBHOUSE

Recent Photo highlights from the Clubhouse

W7DK



Doug AB7DG (left) watches Brad WA7BTC show how a Chameleon Hybrid whip works

10 33 45
CLUB ANNOUNCEMENTS

Chef Paul, W7PFU, shows off a sample of his latest batch of fresh venison spicy sausage!

February Birthdays!!
Happy Birthday to All!!

Oliver Bond	AD7CC	2/1/1928
Gary Farris	KE7WMQ	2/2/1953
Alexine Adonis	KK7IJX	2/5/1972
Jennifer Johnson	KK7IJY	2/5/1972
Carl Rosevear	KB7LIG	2/6/1979
Larry Shank	KT7WTF	2/6/1950
Nikolas Geil	KK7IYT	2/6/1999
Bob Garden	KF7GPO	2/8/1935
Joseph Pavia	KD7LJ	2/9/1955
Paul Matney	W7PFU	2/10/1941
Phillip Rosser	K7PGR	2/10/1947
Dr. Douglas Oakman	AD7AV	2/11/1953
John Wheeler	KA7RMG	2/12/1952
Mark Terjeson	N7FIT	2/14/1954
Dale Skyllingstad	AH6ET	2/15/1988
Raphael Zvetkoff	AI7RB	2/15/1953
Christopher Maher	N7CPM	2/17/1986
John Arbaugh	W7PUY	2/19/1960
Perry Angiono	WB7NIL	2/20/1961
Steven Mulvey	N9MII	2/20/1978
Pamela Terjeson	KC7AZV	2/21/1954
Paul Pettinger	KG7FTN	2/22/1956
David Jerauld	KJ7AKG	2/23/1960
Mike Campbell	KE7JAS	2/23/1947
John Thomas	N7JFM	2/24/1950
George Salisbury	K7GRS	2/25/1941
Wayne Gilham	KD7VWM	2/25/1948
David Riley	W7BAD	2/26/1942
Radik Galyautdinov	KG7HWU	2/26/1964
Mike Holmen	AG7QW	2/27/1942

Got pictures from the clubhouse? Send 'em in!

All photos this page by Dave W7UUU

AROUND THE CLUBHOUSE

Special Events & Highlights from the Clubhouse

STRAIGHT KEY *MONTH* 2024 at the Mighty DK!

This event (SKM) is sponsored by the Straight Key Century Club and celebrates manual Morse telegraphy using straight keys, bugs, and cootie keys. It runs every year from January 2nd through the 31st.

Event stations in the US operate using the same call sign, K3Y, appended with the district number according to their geographic location such as K3Y/1, K3Y/2, or in the case of W7OS's participation, K3Y/7. In addition to the ten mainland US call regions there are also operators in Hawaii (K3Y/KH6), Alaska (K3Y/KL7) and Puerto Rico (K3Y/KP4). In any given call area, only one operator will be on the air at a time.

Photo by Dave W7UUU

Dan KD7SV on left, Randy WB4SPB on right

The goal of the event is for the K3Y station to try to work as many stations on CW as possible, and for the stations hunting the K3Y operators to try to earn a "clean sweep" of all the numerous stations from around the US and the world, as every continent becomes active in this event (excepting Antarctica). Awards are offered for various levels of success in working stations, along with QSL cards to commemorate the event.

This year, the W7OS Museum Station was activated for this event, operating as K3Y/7 and went live on the air on Monday, January 8th at 10:00 AM local PST time, and concluded at 11:00 AM.

There was a sole operator—Randy WB4SPB, along with Museum Curator, Dan KD7SV as backup logger. In all, Randy worked a total of 26 stations in one hour, with station VO1KGZ in St. John's Newfoundland scoring the best DX. All contacts were made on the 15 meter band, running the museum's Drake TR-4 transceiver as the transmitter, receiving on the R-4C receiver. Key used was the Vibroplex Straight Key Standard. And as a witness to the operation, *and* as a pretty solid Morse operator myself, I have to say Randy is one of the finest Morse operators I've known (sorry Randy for putting you on the spotlight but I gotta call 'em like I see 'em!).

A second session was held on January 16th with similar results. ■ *-editor*

SKCC
Straight Key Century Club

Got pictures from the clubhouse? Send 'em in!

STRAIGHT KEY NIGHT

A New Years Tradition

SRAIGHT KEY NIGHT, or SKN, is an ARRL-sponsored event where, during the first 24 hours (UTC) of the New Year, jovial, old-fashioned communication is encouraged using Morse code and mechanical telegraph keys. Many hams also double-down on the old-fashioned element and dust off their more ancient radio equipment. So it was that, on New Year's Eve, RCT members gathered once again at the Clubhouse for our annual Straight Key Night celebration and operating event.

Morse code was heard upstairs (on radios) and down (on code practice oscillators); pizza and other victuals were consumed (including a selection of scrumptious desserts), coffee and sodas were swilled, and numerous QSOs (both on-air and eyeball) were conducted.

An informal headcount tallied 25 people in the clubhouse, down from pre-Covid levels, but plenty enough to make merry. We had three radio sets on the air. We used the club's IC-7610 on 20m for a short while (that band is closing down early these days). 80 meters was the province of the Museum's Drake 2NT transmitter and Collins 75A-4 receiver. 40 meter operation took place on a Heathkit HW-16 novice-era transceiver. Both the Drake and Heath rigs were outfitted with Heathkit HG-10 VFOs.

In all, we made 20 QSOs: eight on 20m, nine on 40m, and three on 80m, to WA, PA, IA, CT, GA, NV, CA, CO, OR, MT, MN and Mexico.

Stations we worked: AG5ZN, W3JJB, NC4RT, WB7BNE, NY1P, W4GAB, N6VNV, N1W, K6GP, XE2S, K6GPB, W0YBS, WB6ZFG, NE9EE, KG7PD, W7PUA, K6TOP, AC6YY, KJ7GNB and NO0V.

Operators were: Quentin K7DRQ, Randy WB4SPB, Radik KG7HWU and Dave W7UUU.

The Big Key was set up on the floor of the classroom, and several members demonstrated their prowess with QLF operation (QLF: "Your sending is difficult to copy, OM, please try using your LEFT foot"). This year's Morse Code Bingo caller/sender was Phil K7PIA. Straight Key Night at the Radio Club of Tacoma is a long-running and always enjoyable combination of social and operating activity. Join us next year, on Monday, Dec. 31, 2024 (January 1, 2025 UTC). ■ *-Contributed by Randy WB4SPB*

Dan KD7SV copies along with another operator
Photo by Randy, WB4SPB

STRAIGHT KEY NIGHT

A New Years Tradition

Radik, KG7HWU, carefully tunes in 40m CW on the club's 75A-4 receiver in the W7OS museum

The W7OS Museum station abuzz with CW for SKN Center: Randy WB4SPB visits with visitor Jim W7VK

Photo by Anne N7ANN

Dave, W7UUU, works station NO0V in Wheaton, MN on the Heathkit HW-16

Phil W7PIA all ready to start leading the Morse Code Bingo game, an annual club tradition

Got pictures from the clubhouse? Send 'em in!

Photos by Dave W7UUU unless otherwise noted

STRAIGHT KEY NIGHT

A New Years Tradition

Joe, K7ZG, daubs away at his Morse Code Bingo score card on SKN!

CW Ace Quentin K7DRQ hard at it with the Heathkit HW-16 Novice rig with a Vibroplex bug

Straight Key Night without pizza would be like, well, straight key night without keys!!

And Steve, AF7YD, agrees!

Got pictures from the clubhouse? Send 'em in!

All photos this page by Dave W7UUU

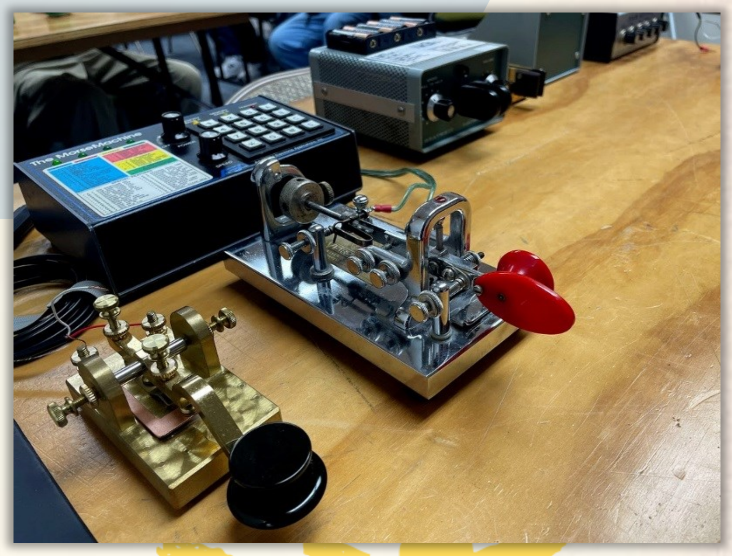
STRAIGHT KEY NIGHT

A New Years Tradition

Sparkling Christmas lights keep the cozy factor alive and well in the Museum for SKN

Morse Code Bingo—a long-held tradition at W7DK for Straight Key night.. Phil K7PIA leads the game

Erick, K7APO & YL finish off their pizza and await the Morse Code Bingo to begin!



Just a few of the keying devices in use for SKN

Got pictures from the clubhouse? Send 'em in!

All photos this page by Dave W7UUU

STRAIGHT KEY NIGHT

A New Years Tradition

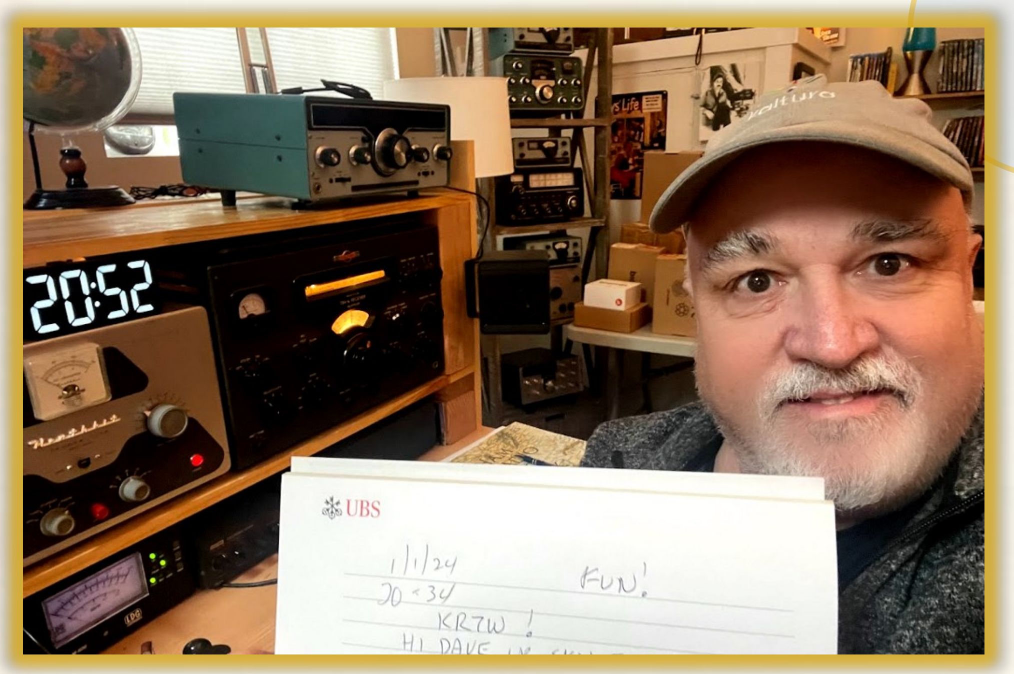
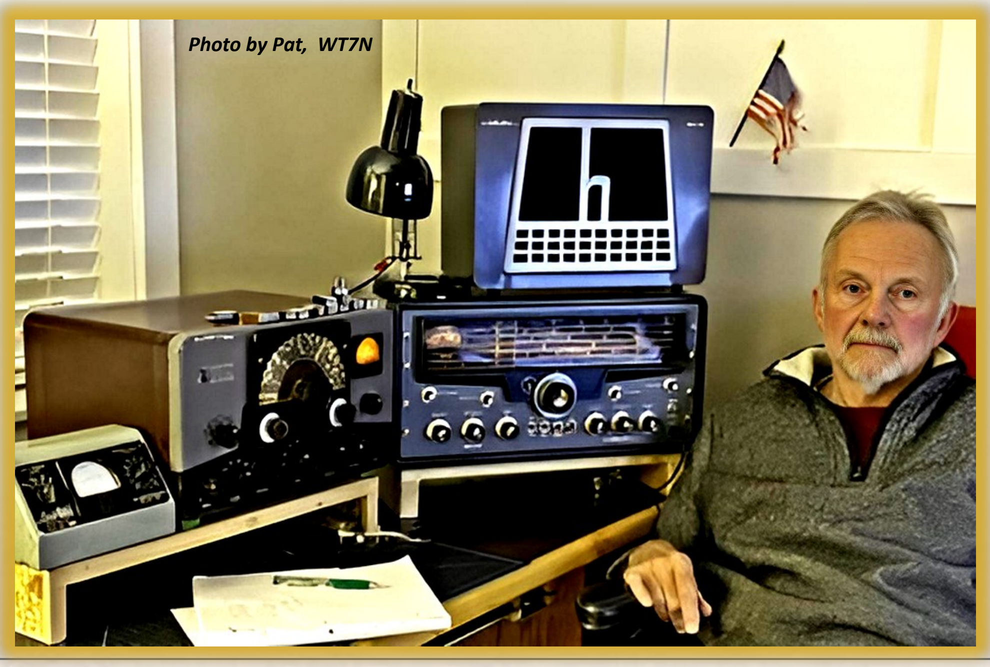


Photo by S. Elfie, W7UUU

Fun Fact:
The key seen in the SKN banner Is the key I used for this QSO!

THIS AFTERNOON, **Monday January 1, 2024, I fired up my Heathkit DX-40 transmitter paired with my Collins 75A-4 receiver. I had just finished tuning up the transmitter into the dummy load, then switched it onto the antenna and called "CQ CQ CQ SKN de W7UUU" exactly twice…. and was delightfully surprised by a great booming signal from none other than Rich KR7W, who now lives in Ammon, Idaho, running his EF Johnson Valiant Ranger transmitter, paired with a Hallicrafters SX-101 receiver. Quite a pleasant surprise to run into a long-time W7DK club member & friend now far removed but still close by radio waves!**

Photo by Pat, WT7N



HOLIDAY & AWARDS BANQUET

Awards to Membership & Holiday Dinner

W7DK
RADIO CLUB OF TACOMA
CORPORATE SEAL
1927
STATE OF WASHINGTON

Stephen AD7AB & Daughter Eileen as he shows us his award for his many club contributions from 2023

President Mike prepares to hand out the 2023 Membership Awards at the banquet

Ollie Bond, AD7CC, shares a tale with the club while Doug AB7DG looks on

Phil K7PIA receives his award for all of his contributions from 2023… Paul W7PFU applauds

The W7DK Awards Banquet took place on December 10, 2023 at the Collins Grange hall at 3404 120th St. East

All photos this page by Dave W7UUU

HOLIDAY & AWARDS BANQUET

Awards to Membership & Holiday Dinner

W7DK

Great turnout for the 2023 W7DK Awards Banquet & Holiday Dinner!

Cozy space as it was in years past! Perfect size for the W7DK Awards Banquet

Paul W7PFU Receives his award for all of his efforts for the club in 2023

Paul, Dave, Adam & Al all line up to receive awards from President Mike W7ZTZ

All photos this page by Dave W7UUU

THE W7DK ELMER BOARD

Do you have a skill or tool to help new hams?

YOU YES *YOU!* Do YOU have a skill you could pass on to new amateur radio operators? Do you possess a skill or piece of gear that you're willing to share with others to fix antenna problems, diagnose noise issues, drive a ground rod, teach Morse, help teach technical topics? If the answer is YES you too could be a W7DK Elmer!! Let any officer know what your skills are or how you could help new hams get a leg up on the hobby. And if you're one of those already on the list, are there any changes we should be aware of? If so please hit the email address (found bottom of page on the right) and let us know so we can update the W7DK Radio Club of Tacoma "Elmer Board"

NEW HAMS OR MEMBERS: If you are looking for help, and NEED AN ELMER to help guide your way, use this table! Find the skill you need under "Skill Description" then look for an Elmer Provider of that skill on the right and reach out to them. ALL of these Elmer's have committed to helping so please don't hesitate.

Skill No.	Skill Description
1	Tech questions / Classes
2	Help with Morse / CW
3	License Exams
4	Antennas / station planning
5	Antenna & Tower erection
6	Buying gear—new or used
7	Equipment repair
8	Operating your gear
9	DX and Contesting
10	Club & ARRL Activities
11	Using test equipment
12	IRLP, digital, APRS, VARA, etc.

Elmer name, call & phone	Skills Provided
Adam W2NCC 360-870-7894	4, 5, 6, 7, 11
Al N7OMS 253-495-9068	10, 12
Dave N7HT 253-363-1692	1, 2, 4, 6, 8
Dave W7UUU 253-820-0890	3, 4, 6, 9 & much more!
Gary WG7X 253-327-0503	1, 4, 5, 6, 8, 9, 10, 11, 12
Mike W7XTZ 253-405-8095	6, 8, 10
Phil K7PIA 253-327-0503	9, 10, 12
Randy WB4SPB 253-761-9391	2
Stephen AD7AB 253-212-9437	1, 3, 4, 12
Steve AF7YD	4, 5, 10, 12
Could be YOU! Be an Elmer!	?
Could be YOU! Be an ELMER!	?

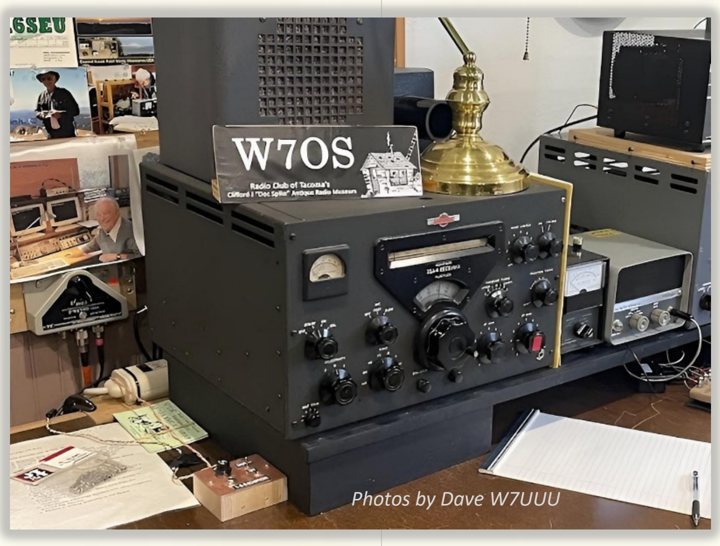
W7OS DOC SPIKE MUSEUM

Museum updates from the Curator

By Dan
KD7SV

IF YOU HAVE ever ventured upstairs and turned left into the W7OS museum, you have probably seen some rather large and imposing old radios. On the table to the left as you walk in is a Collins 75A-4, one of the best performing receivers of its time.

When paired with the matching Collins KWS-1 transmitter, they were called the “Gold Dust Twins”, probably due to their high acquisition cost. ($2500 in 1955, an equivalent of $27,900 in 2023!) This receiver was one of the first designs by Collins specifically made for SSB reception, and it does this well. This receiver employs 22 tubes and weighs a whopping 35 pounds. The museum radio has one of the later serial numbers, approximating a 1957 vintage. The Collins 75A-4 was one of the more desirable dual conversion receivers, on all but the 160 meter band, which was single conversion. Receivers of this generation often had either an external or internal Q multiplier, to provide improved selectivity and rejection of interfering signals. Collins engineers included this circuit in the designing phase and it paid off handsomely in the quality of the radio. There are separate detectors for AM and CW-SSB operations and there is also a noise limiter to help reduce impulse noise. Multiple stages of amplification follow to provide for an audio output of .75 watts. There is also a separate AVC circuit, which is beneficial for SSB and AM operation.



Photos by Dave W7UUU

Specifications for this receiver are good, with a sensitivity of 1.0 microvolt for a 6db signal to noise ratio with 3 kHz bandwidth, image rejection of 50db or more at the center of each band and 70db or more IF rejection at the center of each band.

As the radio aged, users found that audio output began to degrade, leading to the discovery of capacitors that were beginning to fail. Early investigation of units that were in use and not re-capped as the receiver aged found that when certain capacitors failed, it caused a cascading affect, taking out other components and damaging the receiver even further. Internet research shows that 7 capacitors were initially thought to be a major contributor to the failures, but four more have since been added to the list.

The museums Collins 74A-4 is very pleasant to operate. The dial layout is simple and once you get used to it, fairly logical. Turn the rig on, and go make coffee or take a walk while it warms up and stabilizes. Specs say less than 100hz drift after a 30 minute warmup. Select on and adjust the AF gain to a comfortable volume.

W7OS DOC SPIKE MUSEUM

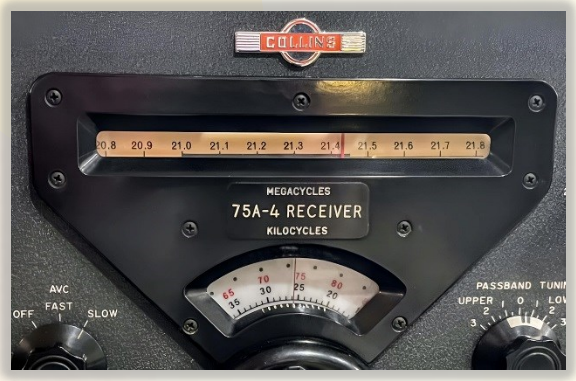
Museum updates from the Curator

By Dan
KD7SV

Depending on your mode of operation or your personal preferences, set the AVC as desired. The selectivity knob selects the internal filter, for CW or SSB operation.

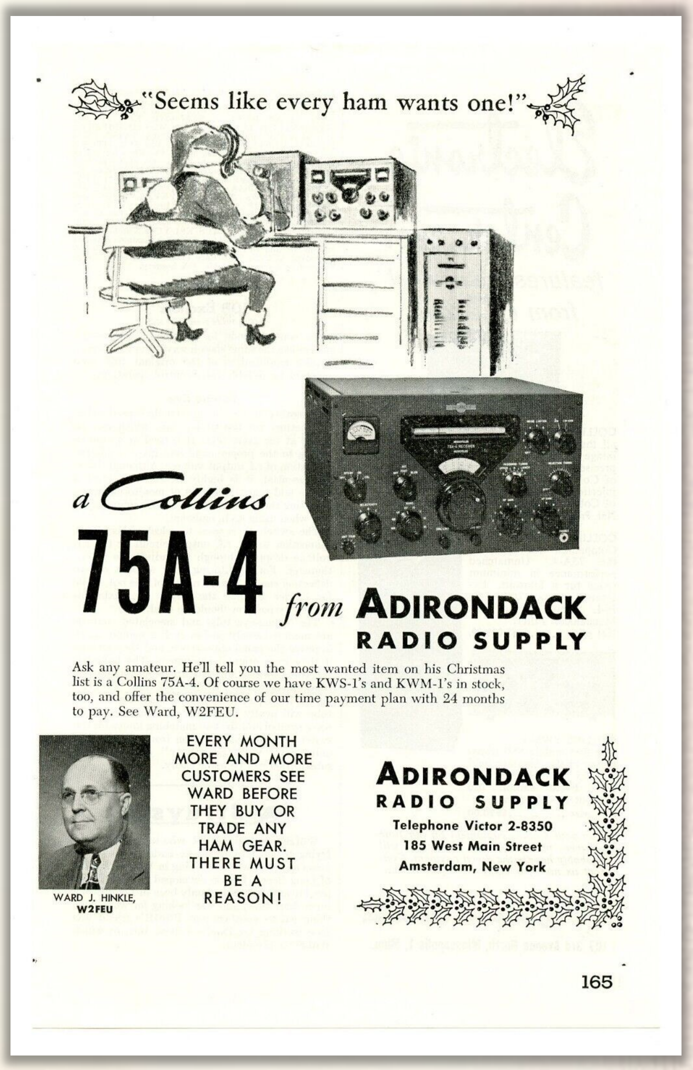
Then adjust the antenna trim for maximum noise after selecting your desired band. Calibrate the dial using the CAL function and set to a 100khz spot on the dial. Center the passband tuning knob and zero beat the frequency.

Using the zero set knob you'll see the hairline on the kilocycles move; place it at the center of your frequency (i.e. a frequency of 7.200 MHz the line should be through the zeros on the kc dial). Calibration is now complete.



The dial indications are split, with megacycles on the upper portion and kilocycles on the lower half. They are also red or black depending on your band of operation. Be sure you're using the corresponding dial. SSB ops will require you to adjust the passband tuning to either upper or lower sideband. The number 2 on either side of the dial is a good starting point, and dial tuning should be use first before adjusting the passband for good signal quality. Engineers developed passband tuning when they discovered they could move the signal around to get different filtering and reduce signal interference. Let's get on the air. Set your desired frequency either on the receiver or transmitter select spot on your transmitter or VFO and find your frequency center. You're ready to go!

-Dan KD7SV



"Seems like every ham wants one!"

a Collins 75A-4 from ADIRONDACK RADIO SUPPLY

Ask any amateur. He'll tell you the most wanted item on his Christmas list is a Collins 75A-4. Of course we have KWS-1's and KWM-1's in stock, too, and offer the convenience of our time payment plan with 24 months to pay. See Ward, W2FEU.

EVERY MONTH MORE AND MORE CUSTOMERS SEE WARD BEFORE THEY BUY OR TRADE ANY HAM GEAR. THERE MUST BE A REASON!

WARD J. HINKLE, W2FEU

ADIRONDACK RADIO SUPPLY
Telephone Victor 2-8350
185 West Main Street
Amsterdam, New York

165

December 1955 QST Ad for the Collins 75A-4
© ARRL

MIGHTY DK! QSO REPORT

Reporting all the HF QSO action from the club

W7DK

EACH MONTH in the Bark, the Radio Club of Tacoma recognizes the members and guests who have made non-contest QSOs using the HF stations at our clubhouse. Saturday Open House, especially, is a time when members have access to this equipment. Why not sit down at one of our operating desks and make a contact or two? Assistance is almost always available for those unfamiliar with the equipment, and if your license class doesn't permit HF operation, ask the denizens of the HF Room or the Saturday clubhouse host to help you find a suitably-licensed control operator to sit with you.

It's a feather in the club's hat for the call sign of The Mighty DK to be heard on the airwaves. So get on the air and get your name in the Bark! (Don't forget to *enter your call sign* as the operator into our logging program.)

Clubhouse non-contest QSOs this period:

NAME	CALL	QSOs
Adam	W2NCC	1
Gary	WG7X	2
Leah	K7IPT	7
Mike	W7MKE	70
Phil	K7PIA	82

Above: Mike W7MKE operates the state-of-the-art Flex Radio 6500 SDR on the South side of HF Room

Below: Adam W2NCC running the newly-acquired Icom IC-7610 SDR transceiver on the North side of the HF Room in the Mighty DK Station ■ *-editor*

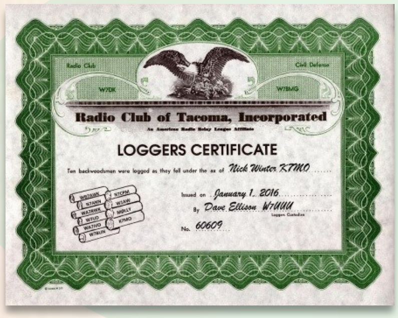
All photos this page by Dave W7UUU

W7DK LOGGER'S CERTIFICATE

Classic "first award" for Members

HAVE YOU APPLIED for your own W7DK Logger's Certificate?! It's FREE and it's EASY! All you have to do is work at least 10 members of the Radio Club of Tacoma, then send in your list of call signs worked, and BAM! We'll print out your certificate and get it too you toot sweet by US Mail.

There are no confirmations required—no logs to submit—and really no rules other than the call signs you submit must be members of the club. You may work them on HF, 2m FM, on FT8 or SSB or any other mode! In fact, one of the best ways to get your 10 contacts is to check into the weekly Tuesday Night Net on the 147.28 club repeater… every Tuesday at 7:30 PM.



Radio Club
Civil Defense
W7DK
W7BMG
Radio Club of Tacoma, Incorporated
An American Radio Relay League Affiliate
LOGGERS CERTIFICATE
Ten backwoodsmen were logged as they fell under the ax of Nick Winter K7MO
Issued on January 1, 2016
By Dave Ellison W7UUU
Loggers Custodian
No. 60609

This venerable award was first launched in 1957, using certificate paper printed by club member Dick Ryan, W7RGD who was a printer by trade.

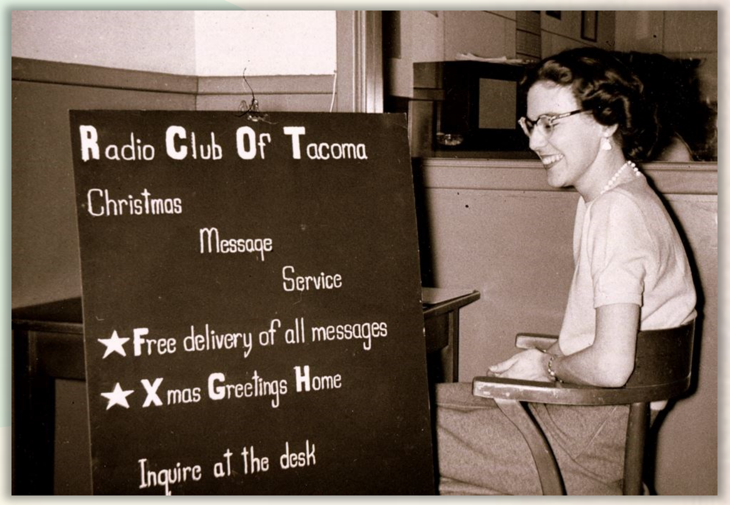
As of the date of this publication, there have been 691 certificates issued, including a few reissues over the years to replace lost certificates.

The original certificates were hand-lettered by long-time RCT member Barbara Osborne, W7UYL (SK 2022), and all of the records were kept in a series of recipe boxes still held by the club.

Wanna get yours? Send in those contacts!

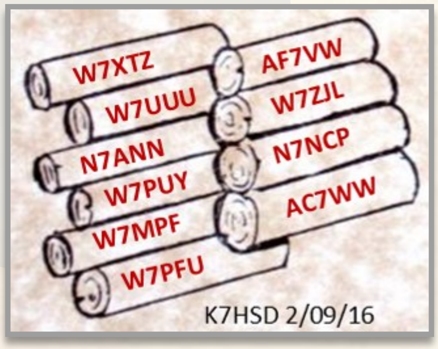
We still have a huge stash of this beautiful OFFICIAL logger's Certificate paper…. So if you do not already have yours, just shoot us an email with your list of call signs worked, and put "Logger's Certificate" in the subject line…

Send to loggersbark@gmail.com



Barbara Osborne W7UYL
ca. 1955 at an RCT USO event

We also issue "Log piles" for endorsements of each group of ten additional stations worked! So don't hesitate—get your Logger's Certificate or Log pile Endorsement *today!*

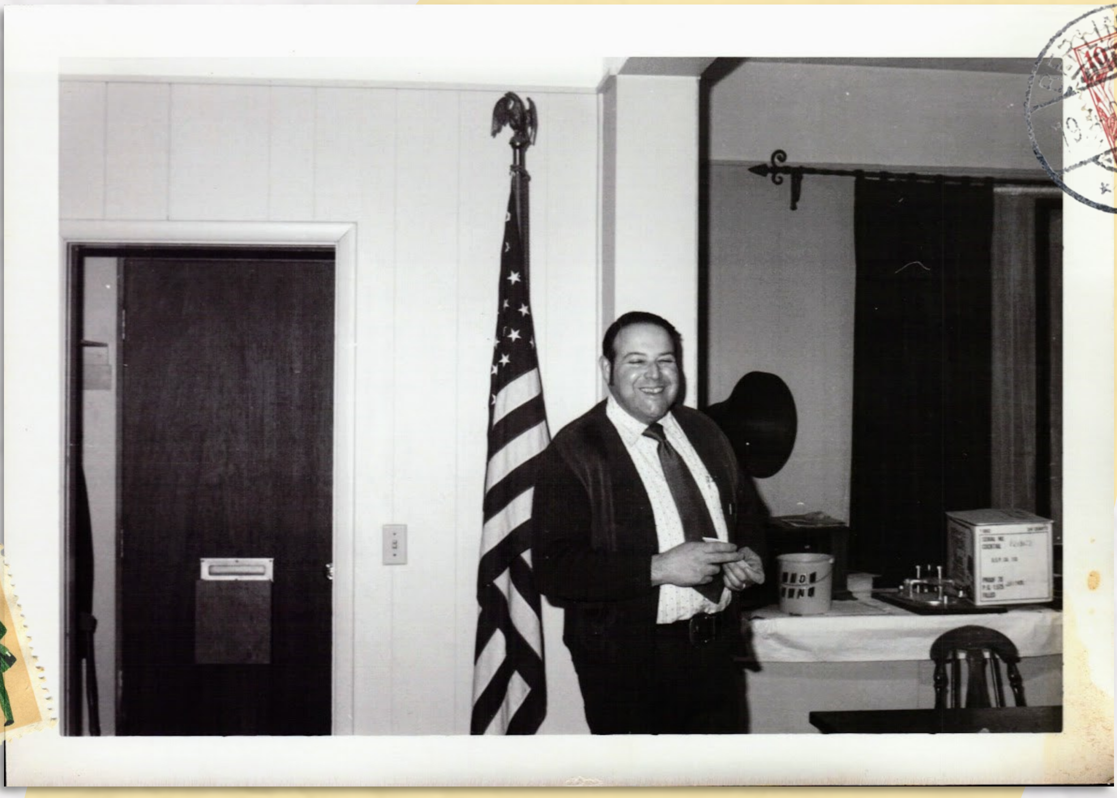


THE WAY BACK PHOTO BOOTH

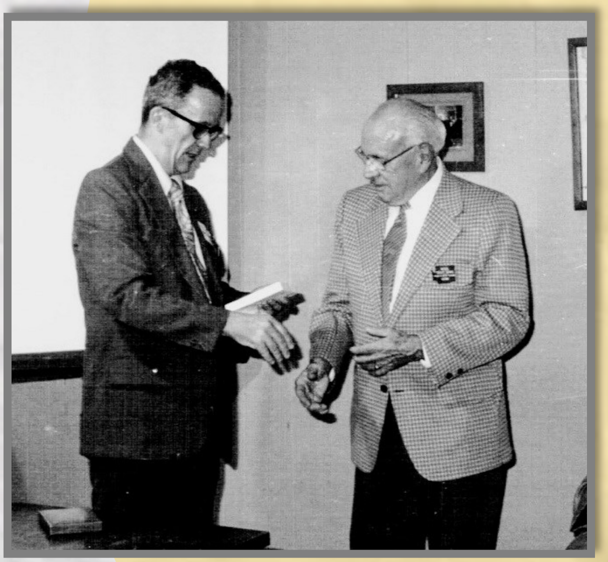
Highlighted photos from the club's past

Researched & Compiled by the Editor

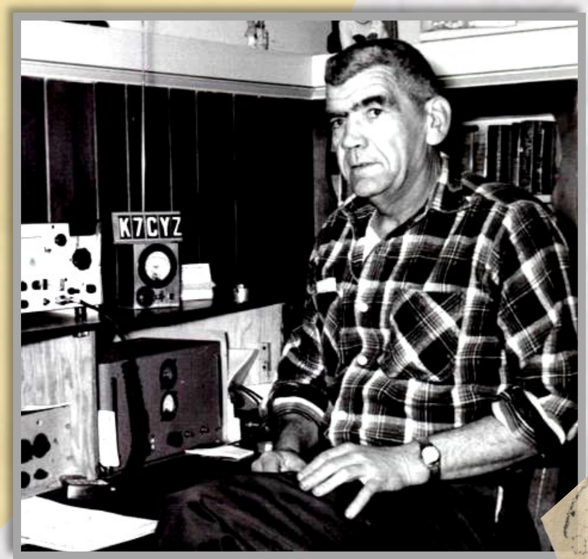
Photo of:
Jim W7LS



Jerry Seligman, W7BUN, inside the front door of the clubhouse before the wall was installed down the middle of the room ca. 1970



Doc Spike W7OS on the right with….
Can anyone identify the man on the left?



Scotty Huntly, K7CYZ in his shack
May, 1966

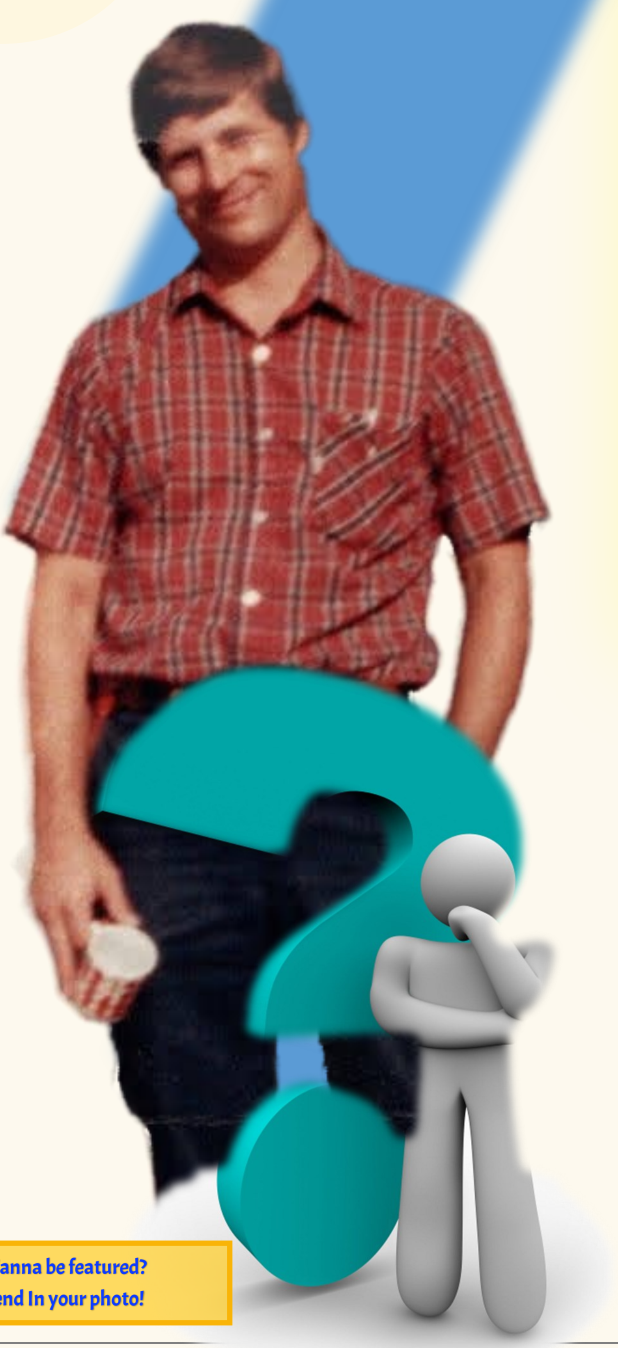
THE WAY BACK PHOTO BOOTH

Highlighted photos from the club's past

Researched & Compiled by the Editor

Photo of:
Jim W7LS

WHO IS THIS MYSTERY MEMBER?



If you think you know who our Mystery Member is, just send an email with your guess… first correct responder will win a

FREE QRZ Bumper Sticker!

Mailed right to your door!

HIGH VOLTAGE
AMATEUR RADIO
73!
QRZ

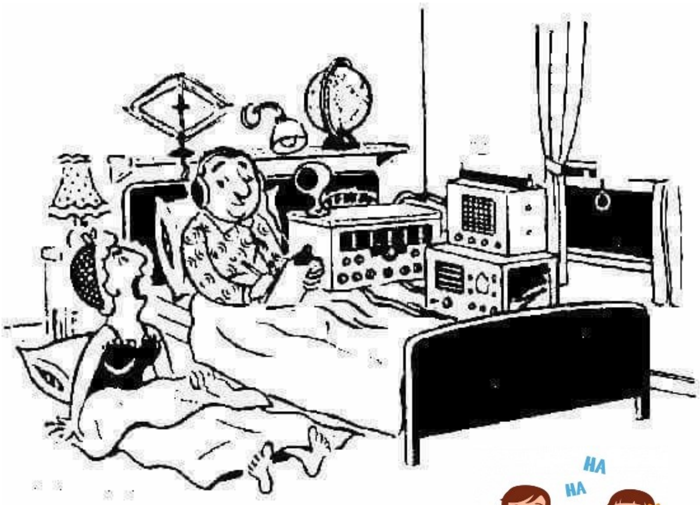
I BRAKE FOR QRZ
HAMFESTS!
73!

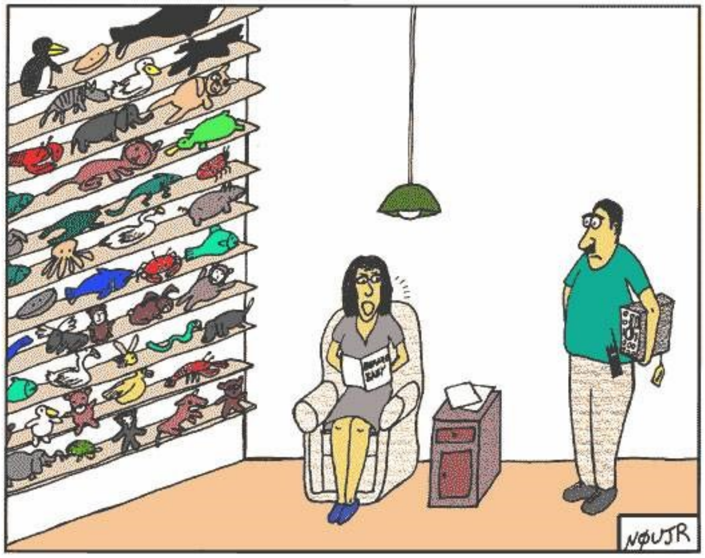
QRZ
I'm good on QRZ.COM

Wanna be featured?
Send In your photo!

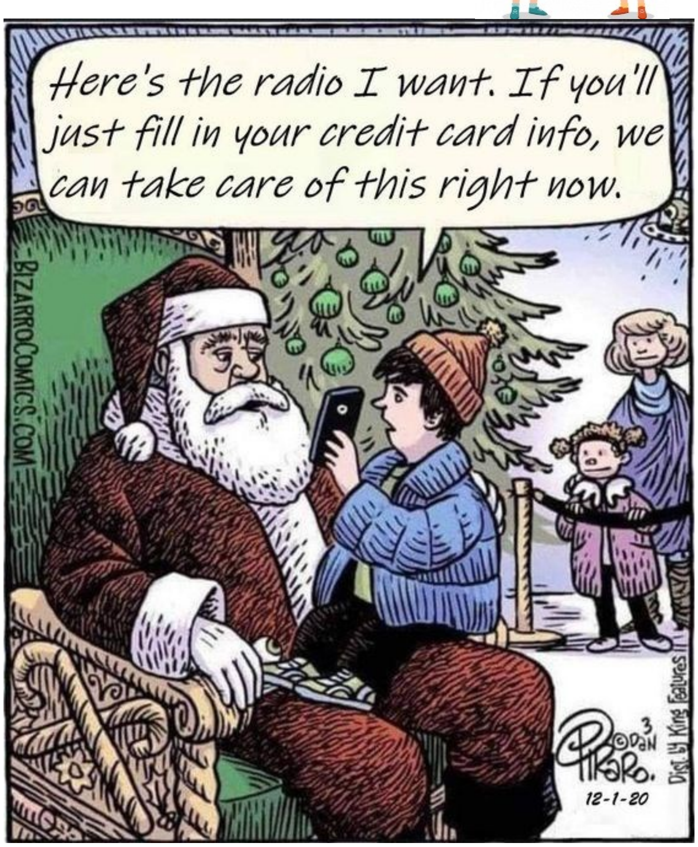
THE FUNNY PAPERS

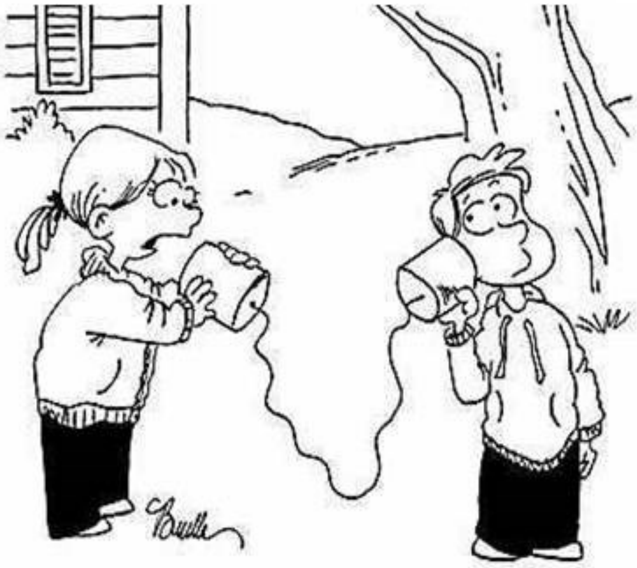
Ham Humor for Humorous Hams




Copyright © 1999 by Greg Trook, N0UJR
N0UJR

"Harold!! What are you doing wasting money on more USELESS radio equipment! Don't you have enough?"


Here's the radio I want. If you'll just fill in your credit card info, we can take care of this right now.
BIZARROCOMICS.COM
© DAN PIRARO 12-1-20
Dist. by King Features



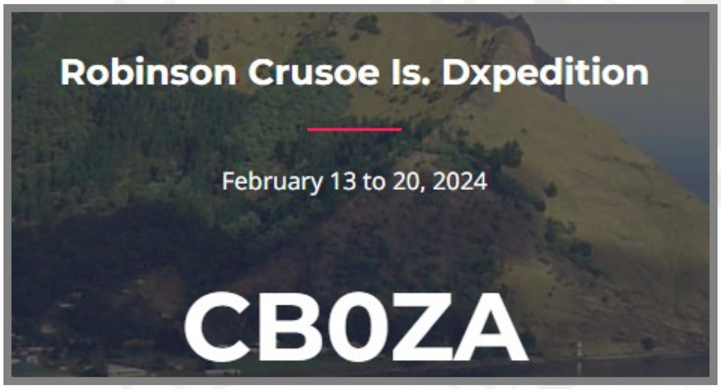
"CQ DX CQ DX CQ DX"

HOW'S DX?

DXpeditions and Notable DX operations

WITH THE BANDS on fire these days, it's a great time to work DX! In fact, in all my years being a ham, the last 10 months have offered some pretty incredible conditions… with 15, 12, and 10 meters often open way into the evening well past dark.

Upcoming DXpeditions you'll want to know about:



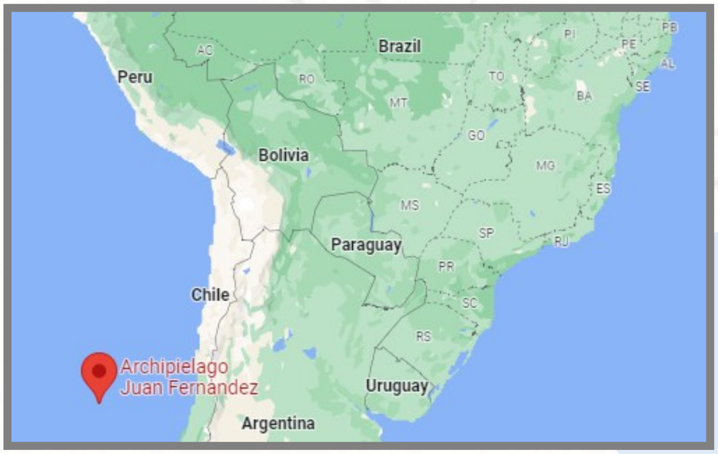
Robinson Crusoe Is. Dxpedition

February 13 to 20, 2024

CB0ZA

Official website: [www.DB0ZA.com]

DX Entity is **Juan Fernandez Islands**. This is a pretty rare one—#61 in the "Top 100 DX Most Wanted"


Peru
Brazil
AC
RO
MT
TO
PI
PE
PB
AL
SE
BA
Bolivia
GO
MG
ES
MS
Paraguay
SP
RJ
PR
SC
Chile
RS
Archipielago Juan Fernandez
Uruguay
Argentina

DX EXPEDITION H40WA TEMOTU PROVINCE
H40WA
Solomon Islands
IOTA
DX EXPEDITION H40WA TEMOTU PROVINCE

Official website: **Temotu 2024**

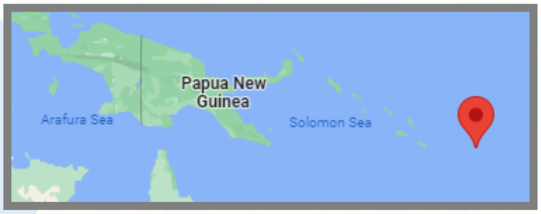
Temotu Island is in the easternmost province of the Solomon Islands in the South Pacific, East of New Guinea, NE of Brisbane, Australia.

"The Intrepid-DX Group is pleased to announce that all of our plans to activate H40 Temotu Province are going well.

Due to changes in flight schedules, we are announcing our operational dates will be from **February 22nd, 2024** and we will complete our operations on **March 7th 2024.**

We have assembled a team of eight operators to make a fifteen-day activation of this entity. Temotu Province ranks #45 on Clublog's most wanted DXCC list.

Team members include: Rob N7QT, Paul N6PSE, Jun OE1JUN/JH4RHF, Heye DJ9RR, Al K3VN, Arliss W7XU, David WD5COV and Scott NE9U. We will make a significant effort on the low bands during this activation. We will use 1500 watts on the 80/160 meter bands. We will use CW/SSB and FT8 Fox/Hound modes."


Papua New Guinea
Arafura Sea
Solomon Sea

HOW WAS DX?

Past DXpeditions and Notable DX operations

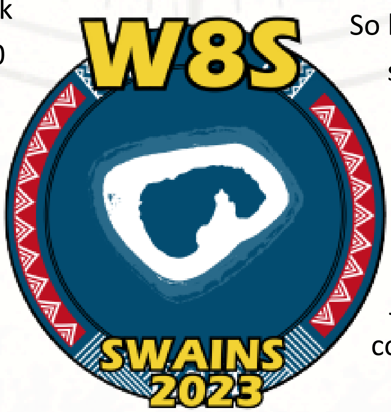
WEB

SWAINS
2023
QSL MANAGER SERVICES
MØOXO
IOTA
W8S

W8S
SWAINS 2023
W8S
SWAINS ISLAND DXPEDITION
October 2023
IOTA: OC200
Swains Island
PA5X - KO8SCA - DJ9RR - NG7M - PG5M - PA3EWP - PA4WM - DL2AMD - PA2KW - DL6JGN

Swain's Island (Olohega in Samoan) is a remote coral atoll in the South Pacific, some 2200 miles Northeast of New Zealand. As is typical of many DXpeditions, the island has no permanent inhabitants even though it is in fact privately owned! The Eli Hutchinson Jennings family have owned and controlled the island since 1856, from the time when it was a copra (coconut oil) plantation for nearly 100 years.

The DXpedition team consisted of ten active hams from around the world: PA5X, KO8SCA, DJ9RR, NG7M, PG5M, PA3EWP, PA4WM, DL2AMD, PA2KW and DL6JGN. During the roughly 2 week event back in October, a total of 90,000 QSOs were made with stations on all corners of the Earth, with the vast majority being North America.


W8S
SWAINS
2023

So finally, the team members are all back home safe and sound and QSL cards are rolling out, and online confirmations are finally happening. Of course, if you were a donor, you'd already have your confirmation as is customary with modern DXpeditions.

But for the rest of us, as of late December, you can now claim your confirmations using the Swains Island Online QSL Request System, or OQRS. And as is now typical of most DXpeditions, the fee to get your confirmation via LoTW (no paper card) is 5 Euros ($5.48 USD) or 8 Euros ($8.76 USD) if you want to also receive a paper card. Of course, Bureau ("Buro") cards are still free but come with a significant wait and don't include LoTW.

So by the time you're reading this, you should be receiving any paper cards you ordered, and your LoTW DXCC will be one entity richer while your wallet is $8.76 poorer. But as is also typical of many DXpeditions today, just wait 6 months and you'll get LoTW confirmations for FREE! ■ *-editor*

POTA / SOTA

Parks & Summits on the Air Activities

BJ Rollison WA7WJR

ARE YOU LOOKING to get on the air and make contacts across the US and around the world? Do you like to set personal radio sport goals and receive free awards for achieving your goals? Do you want to learn more about portable operations, different operating modes, and various antenna configurations? All this and more are waiting for ALL licensed amateur radio operators with the Parks on the Air (POTA) Program!

The POTA program was established in 2017 by a group of volunteers and has grown into a 501 (c)(3) organization with more than 40,000 registered participants worldwide. Participation in the program is free, and you can join in the radio sport fun as an Activator, or a Hunter. The POTA program encourages amateur radio operators called Activators to venture into national, provincial, and state parks and set up portable operations like a mini field-day.

Recent W7DK POTA outing at Kopachuck State Park

Another way to participate in POTA is as a Hunter. The Hunters are amateur radio operators at home, or in another park, who respond to the CQ POTA call from the activators to then complete a contact. Unlike contests, no formal exchange is required for a POTA QSO. The Activators upload their logs, and both the Activator and the Hunters get credit towards various free awards that are automatically generated on the POTA website.

The Radio Club of Tacoma hosts club activations frequently throughout the year. We usually choose state parks within a one-hour drive from the clubhouse for a fun-filled day playing radio! We set up multiple portable stations, use different modes, and try different types of antennas, look over the different kits that members bring, and exchange tips and advice. The greatest thing about our club POTA activations is the social comradery and the sharing of knowledge and experience of a hobby we all love!

Got a POTA story with pics? Send it

All photos by BJ WA7WJR

email loggersbark@gmail.com

POTA / SOTA

Parks & Summits on the Air Activities

BJ Rollison WA7WJR

This year the POTA committee plans to schedule several club activations to give members more time to plan and a chance to visit some of the beautiful parks in our area. We also plan to schedule some overnight activations staying at cabins or campgrounds at parks around the state. The first overnight activation will coincide with the Winter Field Day event on January 27th and 28th at Kitsap Memorial State Park.

POTA is a fun and rewarding aspect of the hobby, and all it takes to get started is registering your call sign on the POTA website at:

http://pota.app/#/signup.

If you are interested in any of the upcoming Radio Club of Tacoma POTA activations, or you want to do your own POTA activation, or if you want more info, please contact POTAOPS@W7DK.ORG.

The club activations are open to all club members regardless of operating class. You do not need a portable radio kit to participate in the club activations. The club has one portable loaner kit, and other members are always happy to share their equipment to get everyone on the air! Club sponsored POTA activations are regularly posted on the club's Facebook page, Discord, in the Bark, and club email announcements.

Recent W7DK POTA Outing at Kopachuck State Park

Got a POTA story with pics? Send it email loggersbark@gmail.com

KD8NOM DEARS
Youth Group

YOUTH ON THE AIR

Programs and stories for Youthful Hams

The following article is a proposal by a 15-year old ham named Edy in Canberra, Australia. He's really thought this through and is looking for others to join in on the fun! Used with permission

KOTA (KIDS ON THE AIR)

INTRODUCTION

KOTA IS AN activity just like POTA or SOTA that gives children and adults a way to connect. It will help bring young minds into the world of amateur radio as well as giving awards to children and adults alike!

NOTE: *KOTA SHOULD NOT BE USED IN ANY SCOUT ACTIVITIES! That's what SCOTA is for (Scouts on the air)*

KOTA is a great way for schools to get their students invested into physics and into electrical work! Schools also gain social reputation, possibly resulting in more enrollments for people who enjoy what they learn! In schools, not everyone needs a license, only 1 person / school / club needs to be licensed (Based on your region) so it makes it easy to identify the school / person.

RULES

KOTA is to be held by Public and Private schools, and any Persons under the age of 21 with a ham radio license. Adults are welcome to make contact with the persons under the age of 21, however people over that limit are not allowed to host or start a KOTA activation by themselves. They require a person under the age of 21 to:

- Register their school / age activation for their region (website coming soon!)
- Are the only ones that can operate ANY Transmission equipment for KOTA.

KOTA participants must be licensed or under supervision of a licensed ham radio operator, REGARDLESS OF AGE!

Awards can be given to any age group depending on a few factors.

If you are over 21, you will only be able to log KOTA contacts based off of school and Age. Rewards will be given for:

  - 10 contacts with the same age for all ages
  - The school that you contact
- If you are under 21, you will get rewards for the area and distance of contact, Or if another school, the school you contact. Also depending on the number of Contacts you do confirm.

KOTA is a fun place for everyone, but sometimes, people will begin to say things that children may not understand. So it is required to have a person at or over the age of 18 to monitor conversations for persons under 18. This rule is here so we can keep our children safe in the very unlikely event of something going wrong such as:

KD8NOM DEARS
Youth Group

YOUTH ON THE AIR

Programs and stories for Youthful Hams

Leaking details about their main house location! You can only tell them the school name and state / country as the QTH

Leaking basic private information such as your first name does not count.

For KOTA, it is advised that the area in which the transmission equipment is used in, should be clean of:

- Loose wires
- Screws
- Tools
- Electrical appliances

In the case of any complications related to the equipment, it is a requirement for there to be an emergency power switch to turn off all transmitters. This is in case anything goes wrong. (A breaker for all outlets does not count; there needs to be a dedicated switch inside of the room).

This document will continue to be updated as KOTA gains more recognition and more regulations are added.

If you have any queries, please send over an email to: edy.blaha@gmail.com.

All documentation for this has been created by VK1AAK

Article used with permission of VK1AAK

Did you know?

While no one really knows for sure, the youngest recorded and documented licensed ham in the "Post Morse Requirement" era at least, is Veronica Harrington, **KC6TQR**, who was licensed as a "No Code Tech" in 1991, not long after the Technical-class code requirement was dropped. She was 5 1/2 years old, and appeared on the David Letterman show demonstrating ham radio (to the extent she was able). Veronica today is still a Tech class operator. See video below...

Veronica KC6TQR
age 5 1/2 Years
David Letterman Show
July, 1991
Click to View!

Click the laptop image to watch the YouTube video of 5 year old Veronica KC6TQR demonstrating radio to David Letterman in 1991

EMERGENCY COMMUNICATIONS

Amateur Radio EmComm News & Topics

[Second Century Column Used with permission July 2021 QST ©ARRL]

EmComm: It's In Our Purpose!

Emergency communications — EmComm — is in the spotlight this month in both QST and On the Air magazines as we begin the 2021 hurricane, tornado, and wildfire season. Let's look at why this is important, not just for some hams, but for all hams

The ARRL Board knows the importance of emergency communications, and is creating a committee focused on its guidance and oversight. EmComm is also a critical element of the spectrum privileges we enjoy. FCC Part 97 provides us with the fundamental purpose of the Amateur Radio Service, and it doesn't mean that amateur radio equals public service! FCC Part 2.1c refers to the term "Service" as "the transmission, emission and/or reception of radio waves for specific telecommunication purposes." The Amateur Radio Service means much more than that. In just five simple principles, the FCC puts forward what it expects of us:

> *Recognition and enhancement of the value of the amateur service to the public as a voluntary noncommercial communication service, particularly with respect to providing emergency communications.*

There are a few noteworthy things to unpack from this principle. The first is that it is our responsibility to make sure that the public at large understands the value of amateur radio. This is where our Section Managers and Public Information Coordinators/Officers come in. Social media can also play an important role here. The second point is that amateur radio is voluntary — it is your choice to participate — and it is noncommercial, meaning you're not getting paid, as it is your avocation, not your vocation. The third is that among all the ways we participate in demonstrating the value of amateur radio to the public, providing emergency communications is of particular importance! Every year, there are communities that find themselves in an unexpected disaster situation, with a disruption to commercial communications and/or power systems. Well-trained amateur radio operators respond with an emergency communications capability when all else fails.

> *Continuation and extension of the amateur's proven ability to contribute to the advancement of the radio art.*

This simple statement reinforces the fact that hams have proven their ability to innovate in the advancement of the state of the art. Today, much of the innovation we see is an expansion into soft-

(Continued on page 54)

Got an EmComm story to tell? Send it in!

(Continued from page 53)

ware-defined radio, shack automation, remote access, connectivity embedded into radios and amplifiers, and weak signal modes. Think about how networking technologies like AREDN and Winlink may factor into EmComm in the future.

Encouragement and improvement of the amateur service through rules which provide for advancing skills in both the communication and technical phases of the art.

The FCC believes that, within the rules of Part 97, they have provided adequate support for hams to advance the state of the art. There's also an implication that there may be room to amend the rules to support new initiatives that can drive innovation. A good example is the use of various digital modes in support of EmComm. As we continue to develop new technologies, we can go — and have gone — to the FCC for reconsideration of sections of Part 97 that need to evolve.

Expansion of the existing reservoir within the amateur radio service of trained operators, technicians, and electronics experts.

ARRL is focused on rolling out our Learning Center platform to grow the community of trained EmComm operators. Your involvement in any on-the-air activities that improve your ability to copy signals and make contacts (e.g. nets, contests, POTA, etc.) helps meet this principle.

Continuation and extension of the amateur's unique ability to enhance international goodwill.

From our leadership and involvement in the IARU, to the relationships we enjoy with radio amateurs around the world, to putting boots on the ground in places like Abaco Island, Bahamas after Hurricane Dorian, we play a vital role fostering international goodwill. Radio signals recognize no boundaries and connect us all into one big community. Taking the time to invest in training for yourself and readiness for your station will prepare you for the potential challenges this summer.

So, get prepared! Get more involved in meeting these five fundamental principles of our hobby, be radio active, be that connector with local hams, and stay safe!

NA2AA

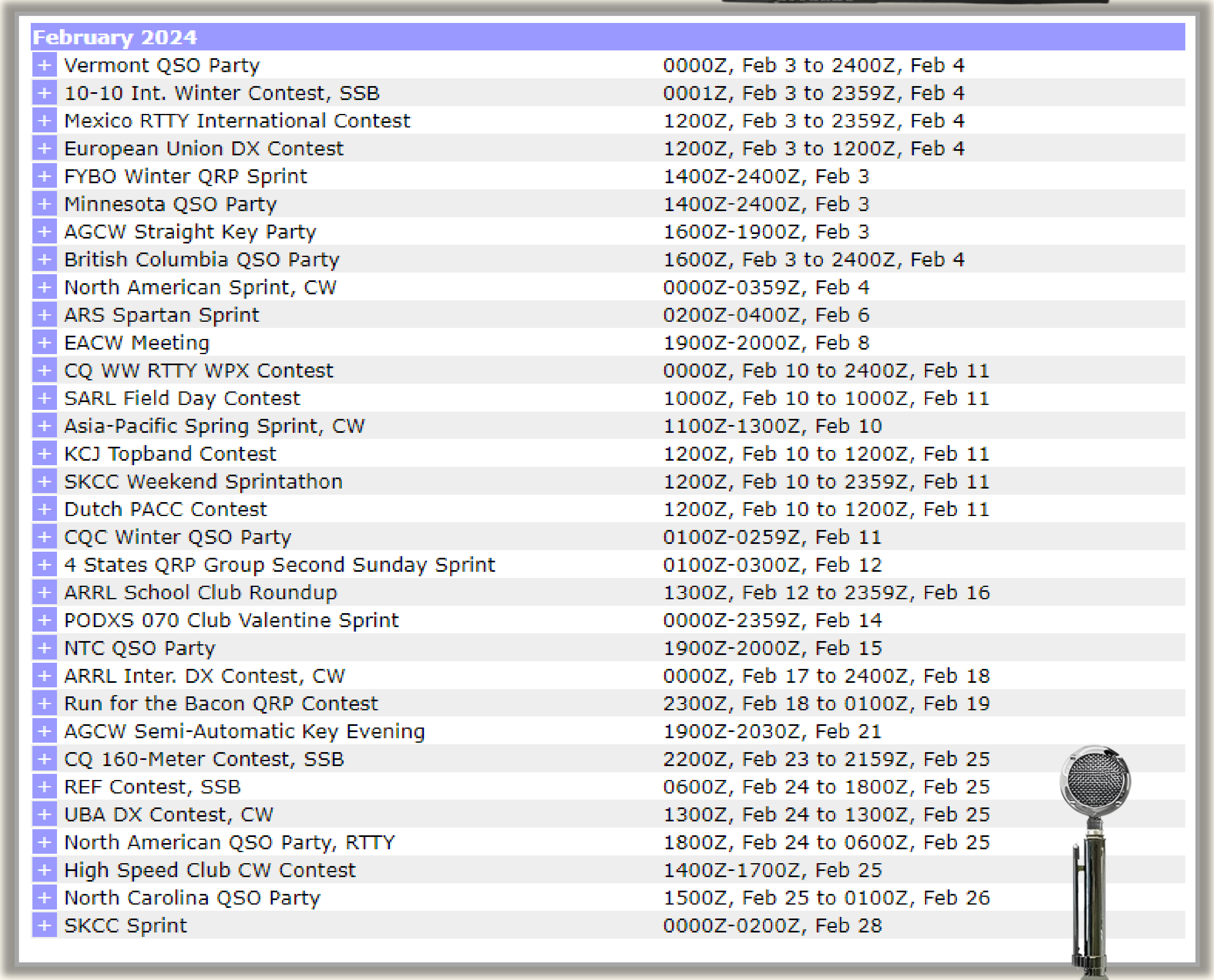
David A. Minster, NA2AA
Chief Executive Officer, ARRL

4O3A Contest Station
WA7BNM
Contest
Calendar

WA7BNM CONTEST CALENDAR

Contest events for the coming month

HUGE THANKS to Mr. Bruce Horn, WA7BNM for publishing his "Contest Calendar" for all these many years… a truly wonderful resource for finding virtually every ham radio contest on Earth that might be happening, in most any mode and most any region in the world. Follow the link to take you to the site, then sort through the various options to find the specifics of every upcoming event. For now, here's the WA7BNM Contest Calendar for the coming month



February 2024	
+ Vermont QSO Party	0000Z, Feb 3 to 2400Z, Feb 4
+ 10-10 Int. Winter Contest, SSB	0001Z, Feb 3 to 2359Z, Feb 4
+ Mexico RTTY International Contest	1200Z, Feb 3 to 2359Z, Feb 4
+ European Union DX Contest	1200Z, Feb 3 to 1200Z, Feb 4
+ FYBO Winter QRP Sprint	1400Z-2400Z, Feb 3
+ Minnesota QSO Party	1400Z-2400Z, Feb 3
+ AGCW Straight Key Party	1600Z-1900Z, Feb 3
+ British Columbia QSO Party	1600Z, Feb 3 to 2400Z, Feb 4
+ North American Sprint, CW	0000Z-0359Z, Feb 4
+ ARS Spartan Sprint	0200Z-0400Z, Feb 6
+ EACW Meeting	1900Z-2000Z, Feb 8
+ CQ WW RTTY WPX Contest	0000Z, Feb 10 to 2400Z, Feb 11
+ SARL Field Day Contest	1000Z, Feb 10 to 1000Z, Feb 11
+ Asia-Pacific Spring Sprint, CW	1100Z-1300Z, Feb 10
+ KCJ Topband Contest	1200Z, Feb 10 to 1200Z, Feb 11
+ SKCC Weekend Sprintathon	1200Z, Feb 10 to 2359Z, Feb 11
+ Dutch PACC Contest	1200Z, Feb 10 to 1200Z, Feb 11
+ CQC Winter QSO Party	0100Z-0259Z, Feb 11
+ 4 States QRP Group Second Sunday Sprint	0100Z-0300Z, Feb 12
+ ARRL School Club Roundup	1300Z, Feb 12 to 2359Z, Feb 16
+ PODXS 070 Club Valentine Sprint	0000Z-2359Z, Feb 14
+ NTC QSO Party	1900Z-2000Z, Feb 15
+ ARRL Inter. DX Contest, CW	0000Z, Feb 17 to 2400Z, Feb 18
+ Run for the Bacon QRP Contest	2300Z, Feb 18 to 0100Z, Feb 19
+ AGCW Semi-Automatic Key Evening	1900Z-2030Z, Feb 21
+ CQ 160-Meter Contest, SSB	2200Z, Feb 23 to 2159Z, Feb 25
+ REF Contest, SSB	0600Z, Feb 24 to 1800Z, Feb 25
+ UBA DX Contest, CW	1300Z, Feb 24 to 1300Z, Feb 25
+ North American QSO Party, RTTY	1800Z, Feb 24 to 0600Z, Feb 25
+ High Speed Club CW Contest	1400Z-1700Z, Feb 25
+ North Carolina QSO Party	1500Z, Feb 25 to 0100Z, Feb 26
+ SKCC Sprint	0000Z-0200Z, Feb 28

WA7BNM Contest Calendar data used with permission

HAM RADIO
HOSPITAL
Where sick radios come back to health

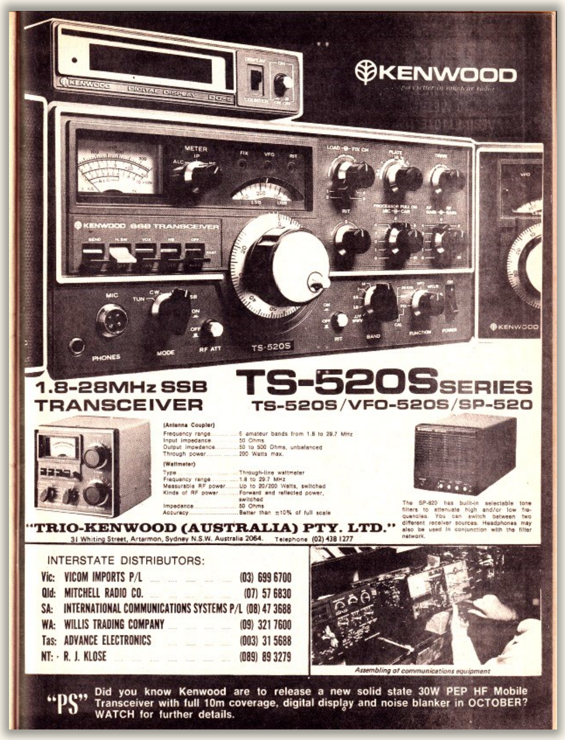
THIS COLUMN is intended to provide a showcase for those of us who enjoy repairing old radios… those basket cases no one wants; to repair or even restore them back to another healthy useful life in the ham radio world to be enjoyed for years to come.

Featured this month is one of the classics of the ham radio transceiver world: the venerable Kenwood TS-520… one of the most beloved of the early "hybrid transceivers", meaning the bulk of the rig is solid state with only the driver and final amplifier stages being tube-operated. As is the case of most such radios of the hybrid years, the driver tube is a 12BY7 feeding a pair of 6146 power tubes, for a nominal power output of 100 watts on all bands.

Photo: Dave W7UUU

Kenwood TS-520 after its recovery in the DK radio hospital

This particular TS-520 came to the club as a donation in need of some minor repairs. Dan Vacanti, KD7SV, the club's Museum Curator and repair guru, replaced a number of brittle and failing panel switches as well as some resistors and other components that had drifted in value over the years and failed. He also upgraded the AC power cord to a modern grounded version for safety, and performed a complete internal and external cleanup of the decades of dust and grime that old radios tend to accumulate over the years. Lastly, all critical controls were cleaned and lubed for smooth and noiseless operation. This radio covers the bands 160, 80, 40, 20, 15, and all of the 10 meter band. Note that it does not cover the WARC bands (30, 17, 12) as those bands did not even exist when this radio was new (1978). And while it was considered an entry-level radio for many years, new hams today will likely need just a little training from an Elmer in the fine art of tuning up a tube-based RF system such as all hybrids have. Unlike modern all-solid-state rigs such as the IC-7300 and others, the old hybrids must be tuned carefully to achieve full RF output while preventing damage to the 6146 final tubes. One of the fading arts of amateur radio!


KENWOOD
KENWOOD SSB TRANSCEIVER
TS-520S

1.8-28MHz SSB TRANSCEIVER

TS-520S SERIES

TS-520S/VFO-520S/SP-520

(Antenna Coupler)
Frequency range........6 amateur bands from 1.8 to 29.7 MHz
Input impedance........50 Ohms
Output impedance........50 to 500 Ohms, unbalanced
Through power........200 Watts max.
(Wattmeter)
Type........Through-line wattmeter
Frequency range........1.8 to 29.7 MHz
Measurable RF power........Up to 20/200 Watts, switched
Kinds of RF power........Forward and reflected power, switched
Impedance........50 Ohms
Accuracy........Better than ±10% of full scale

The SP-820 has built-in selectable tone filters to attenuate high and/or low frequencies. You can switch between two different receiver sources. Headphones may also be used in conjunction with the filter network.

"TRIO-KENWOOD (AUSTRALIA) PTY. LTD."
31 Whiting Street, Artarmon, Sydney N.S.W. Australia 2064. Telephone (02) 438 1277

INTERSTATE DISTRIBUTORS:
Vic: VICOM IMPORTS P/L .... (03) 699 6700
Qld: MITCHELL RADIO CO. .... (07) 57 6830
SA: INTERNATIONAL COMMUNICATIONS SYSTEMS P/L (08) 47 3688
WA: WILLIS TRADING COMPANY .... (09) 321 7600
Tas: ADVANCE ELECTRONICS .... (003) 31 5688
NT: R. J. KLOSE .... (089) 89 3279

Assembling of communications equipment

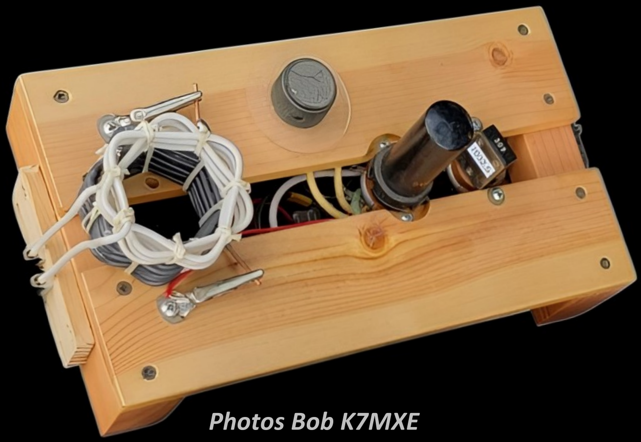
"PS" Did you know Kenwood are to release a new solid state 30W PEP HF Mobile Transceiver with full 10m coverage, digital display and noise blanker in OCTOBER? WATCH for further details.

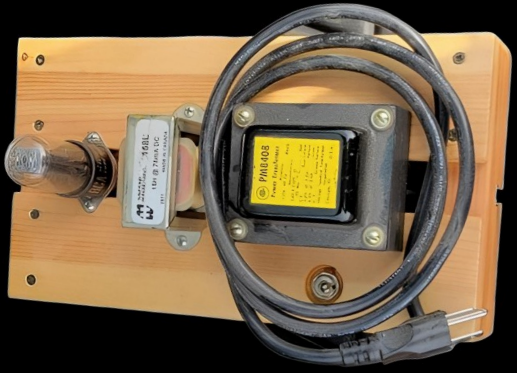
We hope to have this radio on the air soon for others to enjoy—experiencing the fun of working the old hybrid rigs from the past. ■ *-editor*

STRAY TOPICS OF INTEREST

Fun stuff for Hams to read!

W7UUU





Photos Bob K7MXE

Bob K7MXE found this old transmitter (a modern recreation) at a hamfest last year for a whopping $5 including a crystal! The original design and schematic was featured in the ARRL 1948-1950 Handbooks as well as in a QST issue from that era. The circuit is very basic, and is called a tri-tet oscillator, first described by James Lamb in the June 1933 QST magazine. Also known as an Electron-coupled Oscillator, or ECO, it uses a single 6V6 tube which, with a 250-300 volt power supply, would be capable of up to 4 to 5 watts of CW RF output. Construction was open-chassis using scrap wood slats, just as the original called for.

This transmitter was later handed off to Rich KR7W to get on the air, and he made the comment, “by today’s standards of Personal Protective Equipment, OSHA, and even common sense, this XMTR is pretty scary! Lotsa High Volts exposed to the not-so-cautious ham”. Despite this, many were likely built by teenage hams.

During the Winter Classic Exchange contest event, Rich achieved 6 CW QSOs with this transmitter on the 40 meter band, pairing it with an era-correct Hallicrafters SX-71… a receiver that would have been considered pretty amazing for any Novice ham to have on hand to use with this simple transmitter and likely *way* out of his budget unless it was part of his Dad’s ham shack!

(continued next page)

STRAY TOPICS OF INTEREST

Fun stuff for Hams to read!

W7UUU

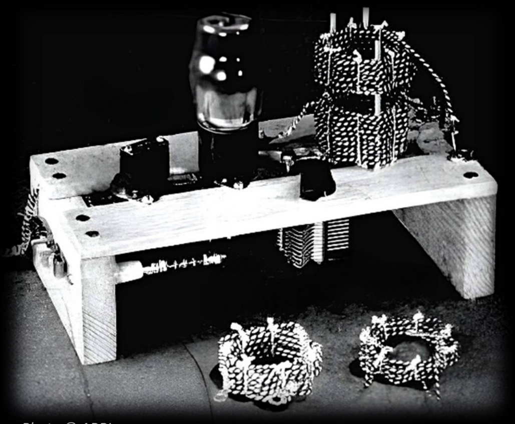


Photo © ARRL

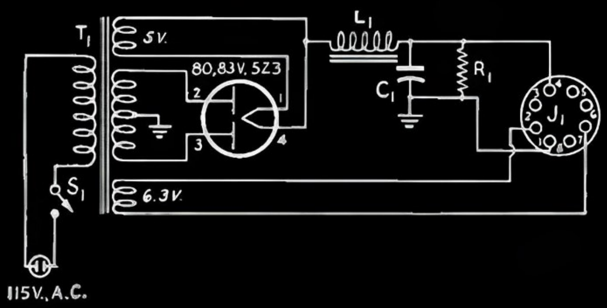


Fig. 6-45 — Circuit diagram of alternative power supply for the simple single-tube transmitter.

C1 — 8-μfd. 450-volt electrolytic.
R1 — 25,000 ohms, 10 watts.
L1 — Filter choke — any receiver replacement type, 15 hy. or more, 50 ma. or more.
J1 — 8-prong tube socket.
S1 — S.p.s.t. toggle switch.
T1 — Power transformer — any receiver replacement type, not over 750 volts c.t., 50 ma. or more.

Suggested power supply schematic

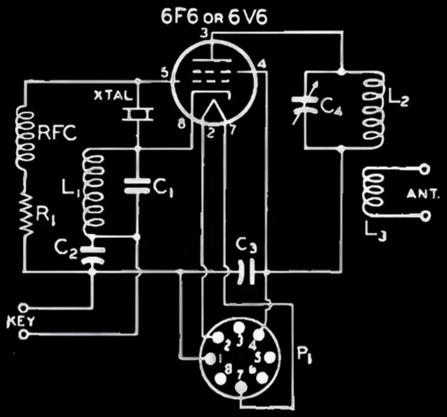


Fig. 6-43 — Wiring diagram of the inexpensive easy-to-build transmitter.

C1 — 470-μμfd. mica.
C2, C3 — 0.01-μfd. 600-volt paper.
C4 — 140-μμfd. variable (Hammarlund SM-140 or Bud MC-1876).
R1 — 0.1-megohm 1-watt composition.
L1 — 5 turns No. 18 d.c.c., 1¼-inch inside diameter, close-wound.
L2 — 3.5 Mc.: 19 turns. 7 Mc.: 12 turns.
L3 — 13 turns and 6 turns. Requires experiment — see text. See text for *L2* and *L3* winding instructions.
P1 — See text.
RFC — 2.5-mh. r.f. choke (National R-100U).

Transmitter Schematic & Parts List

Photo upper left is from the 1950 ©ARRL Handbook, showing the type of construction for both the chassis as well as the band changing coils. Note the plate capacitor fully exposed under the front lip, with 250 to 300 volts DC present during operation! At the minimum, an additional wood slat along the front would have gone far to improve operator safety. ■ *-editor*

STRAY TOPICS OF INTEREST

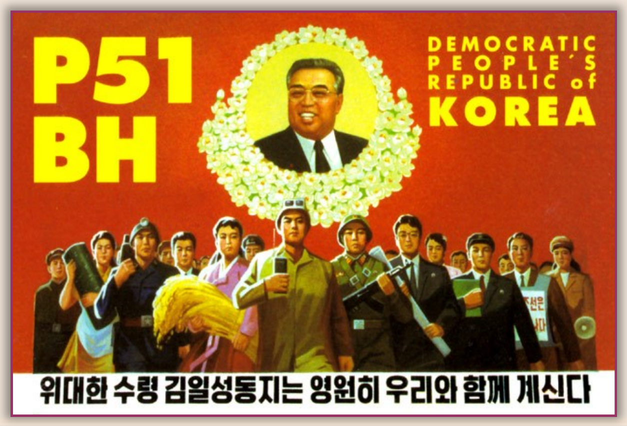
Fun stuff for Hams to read!

W7UUU

Hidden Word Contest!

Somewhere in this edition of the Logger's Bark is a hidden word. If you are the first to find that word and report it to your Editor, you will win a free QRZ Sticker mailed to you! **This month's word is a KIND OF FRUIT**. It will be hiding in a sentence—just tell your editor via email what the word is and the page and you will win if you are the first!

QSL Card of the Month!


P51
BH
DEMOCRATIC PEOPLE'S REPUBLIC of KOREA
위대한 수령 김일성동지는 영원히 우리와 함께 계신다

The rarest of the rare DX: P5, North Korea. Only twice ever activated—the most recent being in April 1999 with operator Martti J. Laine, OH2BH running a Yaesu FT-847 into 20 & 15 meter dipoles. ***Note the propagandistic statement the team was required to be expressed!***

Click for Source

The Democratic People's Republic of Korea is a socialist state headed by the great leader, Comrade Kim Jong Il. The DPRK is independent of politics, self-sustaining in the economy and self-reliant in national defense.

In the DPRK, the leader's care for and belief in the people knows no bounds, and people unanimously hold the leader in high esteem and are loyal to him. Everyone is firmly and single-heartedly united behind their leader.

The DPRK government encourages foreign investment and has proclaimed the Rajin-Sonbong area, "the Golden Triangle", as an Economic and Trade Zone. The Zone borders with China and Russia, and it has underground resources including iron ore, coal, ceramic metals as well as rich forestry and marine resources.

Dinner party in DPR Korea for this event

The Tumen River Area Development Program was launched in 1992 under the United Nations Development Program (UNDP), and the aim of the signatory countries is to create an attractive foreign investment climate, facilitating the growth of intra-regional trade and transit trade as well as the closer integration of their economies.

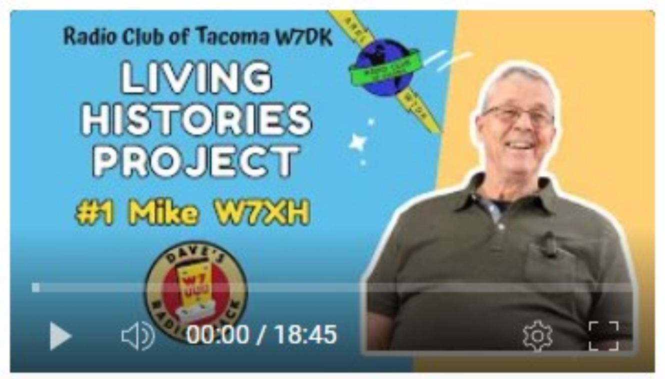
We were pleased to visit Ragin-Sonbong and play a small part in promoting the prospects of the DPRK Economic and Trade Zone. This included shortwave transmissions which brought the DPRK positively into the focus of the worldwide amateur radio community. The P51BH activity marked a culmination of efforts by these three countries promoting their investment prospects through amateur radio.

W7DK LIVING HISTORIES

Member video interviews and profiles

BACK IN 2015, when I was helping to organize the W7DK Centennial Banquet and Celebration, I asked about possibly recording video interviews of club members for future generations to learn more about those that came before them. However, that plan like so many things in life, sort of slipped by the wayside and I truly regret not revisiting such a project much sooner.

W7DK LIVING HISTORIES PROJECT #1



Click picture to watch the video

The fairly recent loss of our most senior member, Worth Gurley, W7WG, a true friend to all who knew him and to strangers alike, reminded me of the extreme importance of capturing aspects of our members lives and involvements not in only ham radio, but also with the Radio Club of Tacoma. So I've finally got that "round TUIT" that I should have found sooner and have embarked on recording what I am calling the W7DK Living Histories Project. For this effort I video a short (15-20 minute) interview with our members in a free-form format to allow them to share some insights into how they came to amateur radio, and how they became involved with the Radio Club of Tacoma.

So far I have produced a small number of these videos but it's an ongoing process, and I hope to continue until all members who wish to participate have had a chance to do so.

One of the challenges of any such project is where to store the data that is the encoding result of all the video that is produced and edited. If stored on a local computer such as at home it is subject to the failures we all know can happen: fire, electronic failure, physical loss (where did I put that hard drive?) or other calamities. Storing at the clubhouse doesn't fare any better in the long run.

So the videos are being uploaded to YouTube, where they have a strong chance of remaining there for a great many years to come. Several are already uploaded, with several more in editing and more on top of that slated to shoot.

I hope to record such histories of ALL members who wish to tell their stores—please contact me if you would like to participate.

Please enjoy this series of videos, with a new link every month. Click the image to watch the video ■ *-editor*

TNT THE NEW HOT THING

Hot and new products to think about

W7UUU

ELECRAFT KH1
TRANSCEIVER

Elecraft, the amateur radio world's premier ***US-made*** radio company, has recently released an interesting new *TINY* QRP CW transceiver that will give the rest of the market something to think about. And hams another toy to consider saving up for! **An HF CW Walkie Talkie! How cool is that?**

The Elecraft KH1 is truly aimed at the SOTA & hiking hams of the world, offering true "pocket size" (large pockets!) 5W 40-15m performance, with built-in ATU, whip antenna, and other great features and options.

FROM THE MANUFACTURER:

"We've just tackled some of the hardest problems with HF field deployment: How to get you on the air in seconds, with an internal ATU that tunes both a built-in, multi-band whip and BNC-connected random wires. Providing field logging that's truly convenient. Creating the optimal user interface for handheld CW operation – because there isn't always somewhere to sit. And making an HF rig that's light enough to use HT-style without wrist fatigue.

The result of this effort is the KH1: an ultralight radio you'll never leave at home. It's ideal for SOTA, hiking, vacation and business travel, or just that carefree hour after the chores are done.

Click to Visit Manufacturer's Site!

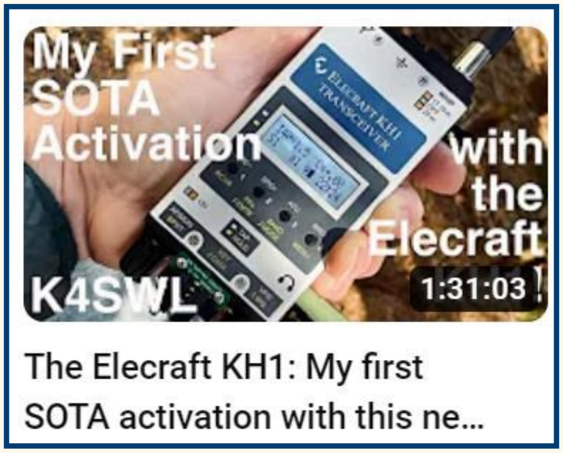
With the Edgewood Package your KH1 becomes a fully integrated station, with fold-out log tray and pen, plug-in keyer paddle, battery, charger, ATU, and whip antenna. It all fits in our versatile ES20 carrying case, with room to spare"

KH1 Features:

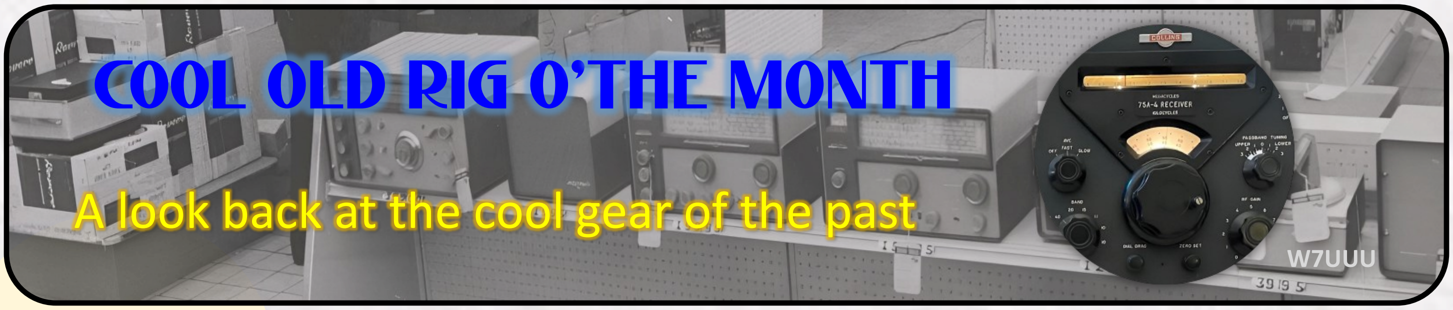
- 40-15m ham bands; 6-22 MHz SWL
- CW mode; 5 watts, all bands
- ATU includes whip & high-Q inductor for 20/17/15m
- 2.5 AH Li-Ion battery & internal charger
- CW decode & 32K TX log
- Scan/mini-pan feature
- Real-Time Clock
- Full remote control
- Speaker
- RIT, XIT, & VFO lock
- Light gray case stays cool even in bright sunlight

The Elecraft KH1 is truly aimed at the SOTA & hiking hams of the world. **Prices start at $549.95**

See it in action—click the image below to watch Thomas K4SWL demonstrate the KH1

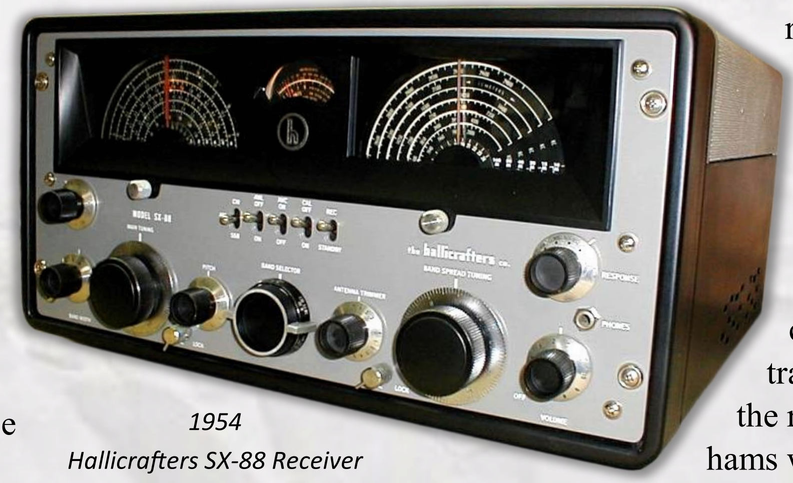


The Elecraft KH1: My first SOTA activation with this ne...



COOL OLD RIG O'THE MONTH

A look back at the cool gear of the past



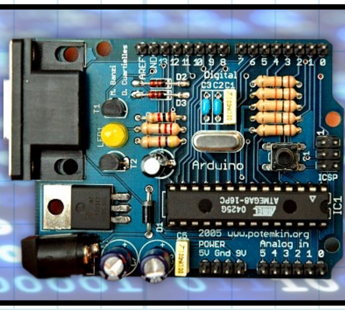
Courtesy RigReference.com

1954
Hallicrafters SX-88 Receiver

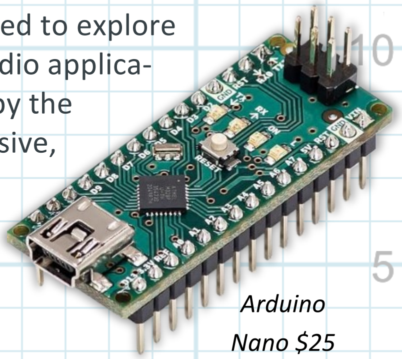
ARGUABLY one of the rarest and most sought-after radios ever aimed at the ham market is the Hallicrafters SX-88 shortwave and ham bands receiver. First offered to the ham world in early 1954, the receiver sold for the princely sum of $595 US dollars, which would be the equivalent of roughly $6655 in today's inflated dollars… and it was *just a receiver!* You'd still have to come up with the cash to buy a suitable transmitter to go with it. The receiver offers full coverage from 535 KHz (the beginning of the AM broadcast band) through 33 MHz The design is a double-conversion superheterodyne, using 20 tubes. And all this performance didn't come in a lightweight package… the SX-88 weighs in at a whopping 79 pounds, making it truly be a "boat anchor" as such heavy old rigs are fondly called. Being the top of the heap for the Hallicrafters company, this superb receiver was heavily promoted in the ham magazines of the day, especially being shown used in exotic DX locales. In March 1954, to help inaugurate the new rig into the market , the company supplied a number of SX-88 receivers with even-heavier HT-20 commercial-grade transmitters (weighing in at 105 lbs.!) for the Clipperton Island DXpedition in the Pacific ocean, off the coast of Central America. The DXpedition started off badly, when the schooner being sailed to the uninhabited island was caught up in foul weather and lost her sails, the captain lost his sextant, and mechanical problems nearly sank the ship and the DXpedition along with it. They became stranded in the notorious Humboldt Current, which further pulled them some 90 miles off course, before being rescued by the Mexican Coast Guard and towed safely to their destination. This amazing DXpedition helped put the SX-88 receiver and HT-20 transmitter pairing on the radar of high-end hams world-wide. But the price was a huge barrier for most, and very few SX-88 receivers were ever sold. It's estimated there are only 100 left in existence. Today they fetch nearly what they sold for new—between $3000 and $6000 USD. Rock Star Joe Walsh once purchased one for nearly $10,000 just to keep it from leaving the US in a world-wide eBay auction. ■ *-editor*

MICROCONTROLLER WORLD

Arduino, Raspberry Pi, Basic Stamp, & More



SO WHAT IS A MICROCONTROLLER?

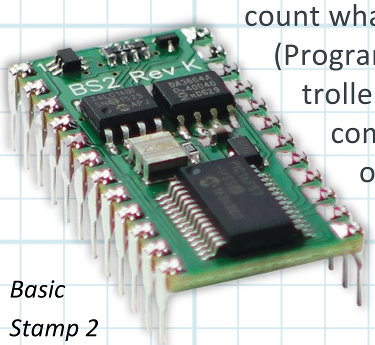

Arduino Nano $25

This column is intended to explore the myriad of ham radio applications made possible by the use of small, inexpensive, and powerful microcomputers that have become such a prevalent thing in amateur radio today. Everything from simple homebrew experimenter projects like timers, clocks, code oscillators and keyers, all the way to complex commercial products like advanced antenna analyzers, can be made to work based around these amazing little PC boards.

So what really is a microcontroller? Well, in the context of this column, it's any number of actual computer processor chips and their supporting circuitry, all assembled on a single printed circuit board. This board, what this column means when referring to a microcontroller, provides all the circuitry needed to perform a useful control task: a microprocessor (the computer itself), input and output (I/O) circuits, a clock generator (often using real time), RAM to store programs, and whatever other support ICs are needed for it to work.

These often include USB or serial ports for sending programs to the PCB, controlling outside devices like mice and keyboards, etc. Most also offer networking capabilities to make use of Wi-Fi and Ethernet to "talk" to other devices and resources. But one of the single most defining features of a single-board microcontroller is access to the computer itself using simple IO pins… electrical connections to and from the outside world for the builder to attach important peripherals: Morse keys, control switches, indicator lights, etc.

Today there are a number of popular microcontrollers from which to choose—from the most basic and least powerful, up to boards that could take the place of a desktop computer for many applications, but still be extremely small, affordable, and customizable.



Basic Stamp 2 $70

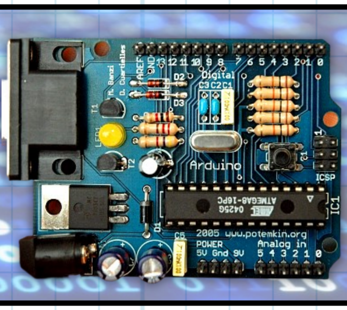
If you were to count all of the variations of such devices from all of the various manufacturers, there are around 100 single-board microcontrollers on the market today! And even more if you count what are called PICs (Programmable Interface Controllers) that are essentially a computer on a chip, without the PCB and all the refinements of the single-board computers.

But we're going to concern ourselves in this column with what are really the "Big Three" - the Arduino (and its variations), the Raspberry Pi family of microcontrollers, and more in the fringes but still popular, the Parallax Basic Stamp—the very first popular single-board microcontroller.

While the Basic Stamp is indeed on the fringes these days, I include it for one simple reason: it uses a variation of the super-easy and once very popular programming language called BASIC. Once upon a time (1970s through 1990s) BASIC was very often the first programming software students learned, simply because it's so easy to use. BASIC's big strength is just that: the code is very user friendly, using a structure that's intrinsically

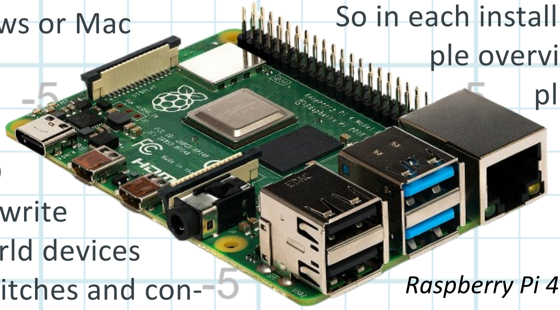
MICROCONTROLLER WORLD

Arduino, Raspberry Pi, Basic Stamp, & More



obvious after just a short exposure.

The Raspberry Pi microcontrollers (especially the current crop, the Raspberry Pi-5, and the previous rev, the Pi-4, by comparison to the others, are at the top of the power curve. In fact, the Pi was originally created to get affordable computer hardware in the hands of students in developing nations. To that end, Raspberry Pi microcontrollers can easily run variants of the Linux operating system and allow the Pi to become a full-blown desktop computer system if need be. Just add keyboard, mouse, and HDMI monitor and you can have a complete desktop computing experience not terribly unlike that of Windows or Mac but at a tiny fraction of the cost.



Raspberry Pi 4

$65

The Raspberry Pi however also offers up a full complement of IO connections to allow the user to write programs to interface to real-world devices like LEDs, sensors of all types, switches and contacts, and pretty much anything you might need to build real-world projects just as you can do with the Arduino family of boards and Basic Stamp.

But as with the Arduino, the programming languages supported by the Pi (Python, Scratch, C, C++, Java, Perl and others) have a much steeper learning curve just as the Arduino which runs C++

However that shouldn't stop anyone in the ham world from ignoring the Pi or the Arduino! In fact, the vast majority of ham radio projects based around a single-board microcontroller are designed for the Arduino with many as well for the Pi. And because the Pi uses such a high-level operating system, many ham applications are just an app download away: things like shack UTC clocks. Geochron-style greyline clocks, Morse keyers, etc. are all out there in the internet, mostly free for the taking and fully customizable by the user.

The Pi also makes a cheap and easy way to get into the WSJT-X HF digital modes, most notably FT8 and FT4, without the expense or the bulk of a full-blown Windows or Mac computer system—making the Raspberry Pi a strong candidate for super portable POTA and SOTA setups to pair with an equally compact radio such as the QRP Labs QDX Digital Transceiver (only about $70 in kit form and covers 4 bands with 5-watts for FT8 and other WSJT-X modes)

So in each installment, we'll start off with a simple overview of what each of these main platforms is, what software skills would be needed and how much you'd expect to spend to get up to speed to do fun stuff!

Over time, I intend to offer up real-world examples of projects that can be built.

But my true hope is this column will bring out the single-board microcontroller gurus in the Radio Club of Tacoma, who will start to submit materials to the Bark and help grow this column. Single-board microcontrollers are a great club project and have a large following among the younger hams.

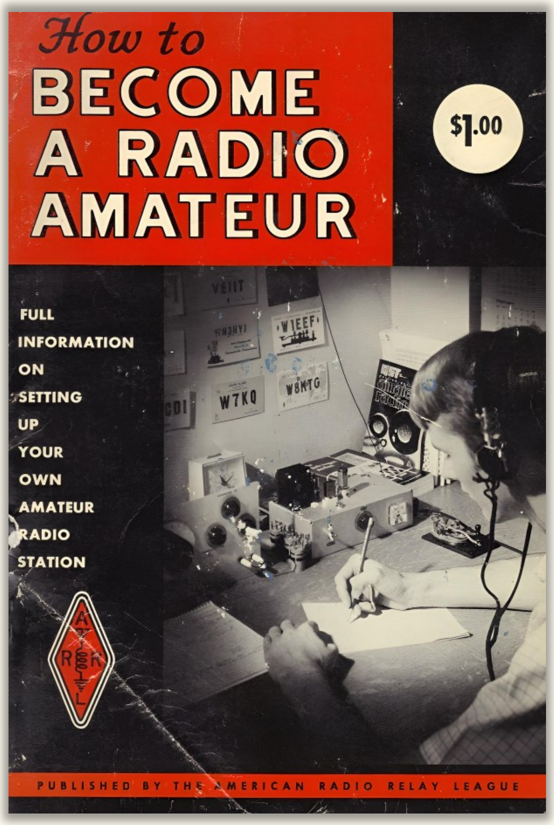
So be watching this space, and please—if you would like to become a contributor, please reach out at the email down at the bottom and we'll start to work together to get your projects published!! ■ *-editor*

HOMEBREW & KITS CORNER

Radio homebrew projects both large & small

7MHz
22k
22uH
1n
10-16p
BD139
100n

Many hams would love to proclaim on the air, "station here is 100% homebrew old man!" but only a tiny percentage have actually accomplished such a feat of homebrewing.


How to
BECOME
A RADIO
AMATEUR
$1.00
FULL INFORMATION ON SETTING UP YOUR OWN AMATEUR RADIO STATION
PUBLISHED BY THE AMERICAN RADIO RELAY LEAGUE

But one ham I know, Martin Marris **G3EDM** of Wye, England (formerly **KB1WSY** in Massachusetts), did just that. It took him almost 50 years to attain the goal. Licensed in the US in 1971, Martin never actually got on the air as a Novice or later as a General class operator. Life simply got in the way as happens to so many.

He always dreamed of building the simple (in concept but not in reality) "Novice ham station" featured on the cover of the 1978 edition of the ARRL book, "How to become a radio amateur". It's one of those endearing photos that graced the covers of such books in the 1950s through 1970s: young man with headphones, focused on copying Morse from a small homebrew receiver before taking his turn at the key in response. I admit that I too saw those book covers in my ham youth and thought how neat those simple stations seemed.

But Martin wanted the picture to become his reality, so finally in summer of 2014, he began sourcing all the many parts and pieces to build the very station featured on the cover of the book. The transmitter was a 2-tube Boosted Pierce design, with build-in CW sidetone and TR switching so it would work directly with a receiver, which was a very basic 3-transistor regen with coils that could be wound for shortwave listening bands as well as the amateur bands. At the time of the book publication, parts to build gear like this were fairly cheap and very plentiful. Electronics shops and "jobbers" as they were called, stocked all the bits needed. But by the year 2014, most of those vast stores of once-common parts had dried up almost completely and Martin had to spend a couple years sourcing the pieces needed so he could exactly duplicate the transmitter and receiver from the cover of the ARRL how-to book.

He completed the build by 2017, of both the transmitter and receiver. But once again, life had its way and Martin's dream of getting this station on the air was put on the back burner. Looming large during that time was his move from the United States back

HOMEBREW & KITS CORNER

Radio homebrew projects both large & small

7MHz
22k
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1n
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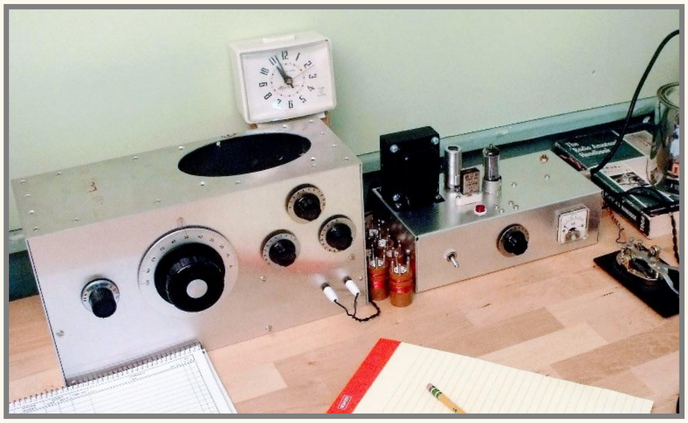
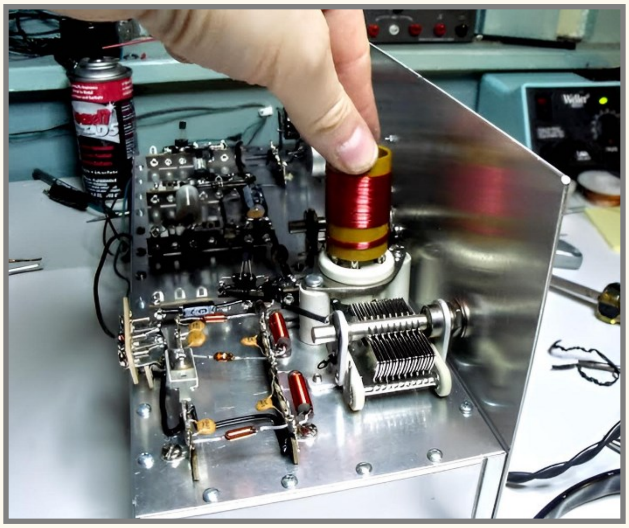
BD139
100n

to his native England, settling in the village of Wye—an hour and a half SE of London in the Ashford district in the Kent countryside.

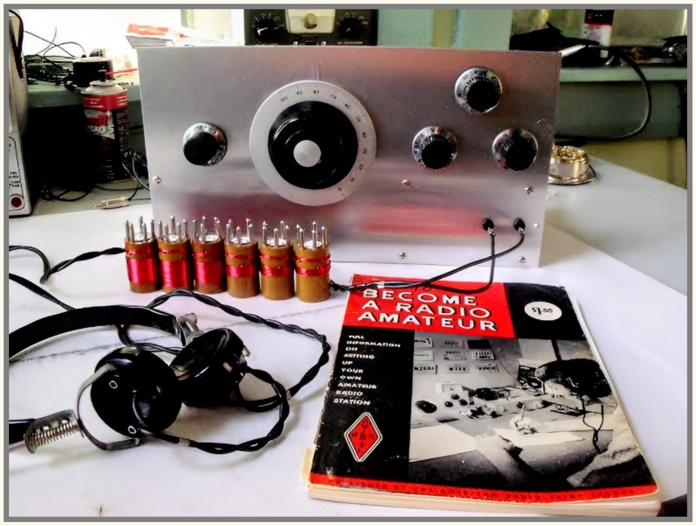


By summer of 2021, Martin was fully settled back in the UK, freshly re-licensed with his grandfather's call sign, G3EDM, and ready to finally get on the air as a ham. On August 27th, 2021 he had his first QSO ever with Bernhardt, **DF6YF** in Hagen, Germany—a distance of 500 miles… the same distance as a ham in Tacoma working a station in Redding, CA or Alberta, Canada. Not at all bad for a transmitter putting out roughly 4 watts to a simple 40m dipole using nothing but a 3-transistor regenerative receiver, all built by hand from instructions in a 50 year old book. Way to go, Martin! Yours is truly a story of perseverance and determination to accomplish ham radio with a 100% homebrew station

■ *-editor*



Photos by Martin Marris G3EDM



Did you know?

Prior to the mid-1930s virtually all amateur radio gear had to be homebrewed, as commercial products—while available—had steep price tags. Even through the 1950s, a very large percentage of ham transmitters were homebrew

HOMEBREW & KITS CORNER

Radio homebrew projects both large & small

7MHz
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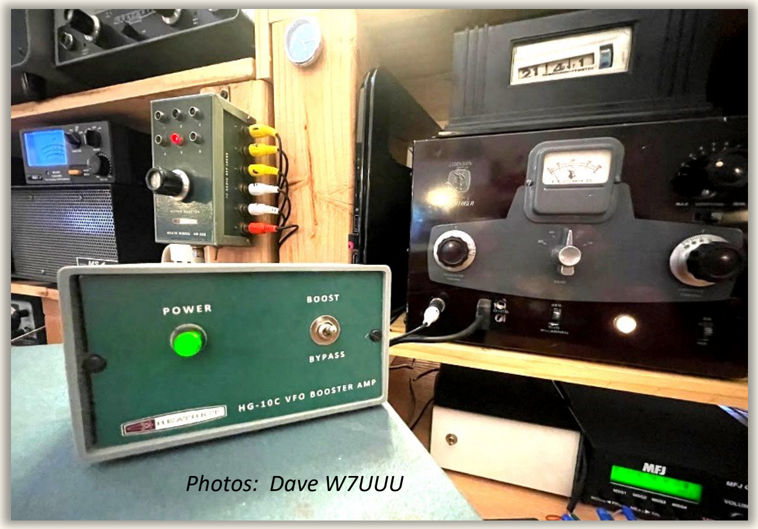
22uH
1n
10-16p
BD139
100n

VFO Booster amp for HG-10

MY HG-10 VFO 5v RMS output was not sufficient to drive my Johnson Adventurer transmitter to full power so I was looking for an easy way to boost it. The Adventurer needs around 10v RMS drive to attain full output, while the HG-10 is roughly half that. While not truly homebrew in the sense I used a $15 pre-built circuit board, they provide a schematic and you could easily duplicate it—even skipping the SMD parts and using thru-hole parts on a perf board. It's a very simple circuit, using two generic 2N2222 transistors as a two-stage amplifier. The board I used is from www.CASARAIN.com and is listed as the DDS VVO Amplifier board for $14.99. Once all the required connections were soldered to the board, I simply hot-glued the tiny PCB to a scrap of wood inside the enclosure. The coax I used came from an inexpensive RG-316 jumper cable but most any 50 Ohm coax would work. RG-174 would be ideal. Power for the booster amp is provided from my shack 13.8 Vdc buss system via a standard coaxial power connector. The toggle switch for “bypass” and “direct” is just a fancy way to say “On and Off”. When the buffer is not powered, the input signal appears at the output at full potential. Total construction time (not including the fancy box artwork) was only an hour or so.



Photos: Dave W7UUU

Booster amp mounted in “Heathkit-styled” box

WWW.CASARAIN.COM
DDS VFO AMPLIFIER
+
R1
D1
Q2
C5
C1
OUT
R3
Q1
C3
R7
JP1
IN
RoHS
R4
R5
R6
C4

As is my tradition with my “Heathkit creations” I gave this one the model number HG-10C VFO BOOSTER AMP and used the purple Heathkit logo from the 1960s. And it works GREAT! I now have more than enough drive on all bands including up to 10 meters on the Adventurer. Waveform looks good on my scope and it makes the EFJ very happy. I put a power switch on it just so I could compare boosted vs. non-boosted and it's very evident how well it's working.

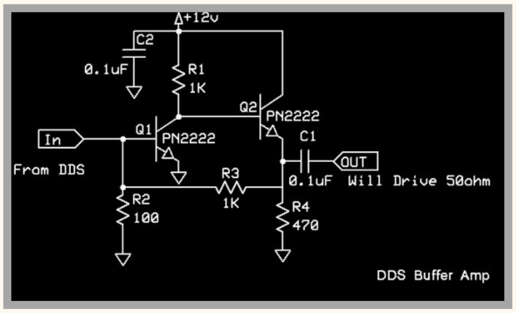
I tend to like a more finished look in my homebrew projects so I used an old Heathkit CPO cabinet from the junk box, with its guts long ago gone, and built the VFO amp into that so it would look more fitting when paired with the HG-10 VFO. Of course, you could use this amplifier board with most any Novice-era transmitter—just be careful to watch your grid drive. And for those who might be wondering about the **KN7NNN** call sign in the photo—that's my Nostalgic Novice Network club call that I often use when operating the Olde Tyme rigs in the Boat Anchor side of my shack. ■ *-editor*

HOMEBREW & KITS CORNER

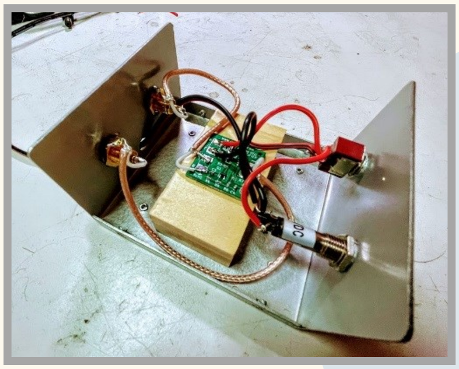
Radio homebrew projects both large & small

7MHz
22k
22uH
10-16up
In
BD139
100n

Closing details of the VFO booster amplifier


+12v
C2
0.1uF
R1
1K
Q2
PN2222
Q1
PN2222
In
From DDS
C1
OUT
R3
1K
0.1uF
Will Drive 50ohm
R2
100
R4
470
DDS Buffer Amp

Schematic of the amplifier



Inside view

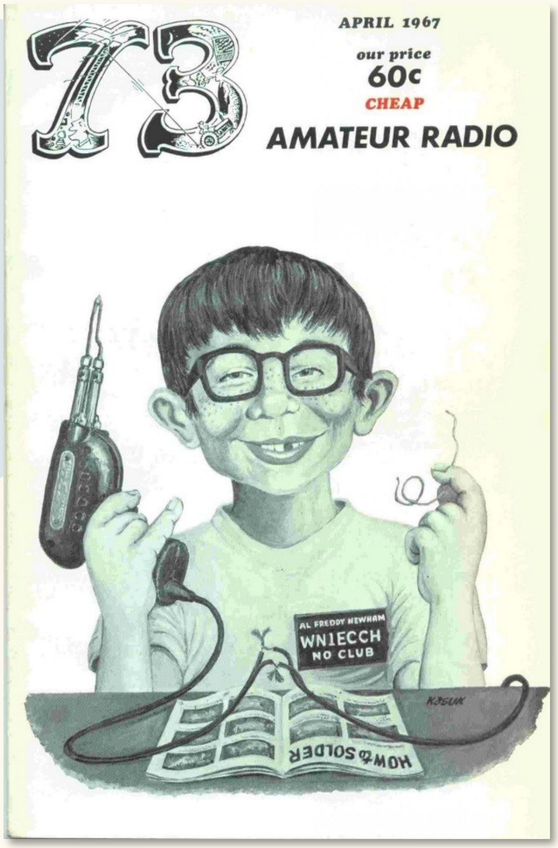
In use with the Adventurer

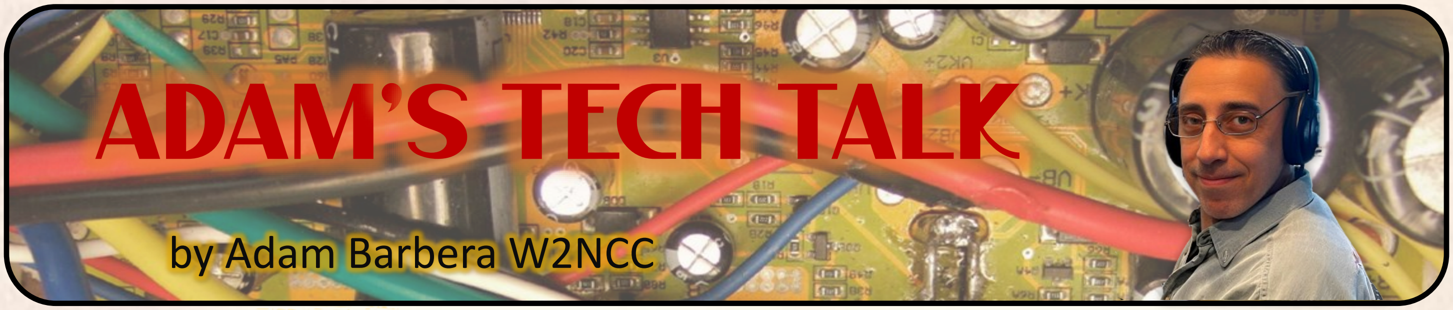
Do YOU have a homebrew?

Share it! Please send it in!

loggersbark@gmail.com

Don't worry about perfect photos—we'll doctor them up to look like a pro shot them! Same with the text—just say what you can and we'll make it sound like Hemmingway wrote it!


73
APRIL 1967
our price
60c
CHEAP
AMATEUR RADIO
AL FREDDY NEWHAM
WN1ECCH
NO CLUB
HOW TO SOLDER



ADAM'S TECH TALK

by Adam Barbera W2NCC

ICOM IC-7610 profile settings: Using the SD Card Function

BACK UP YOUR SETTINGS!

ICOM
IC-7610
7.070.000
14.025.000

THE ICOM IC-7610 supports SD cards and USB drives to backup and restore radio settings. Storing your radio settings to a USB drive or SD card can be helpful in several ways. For instance, it can help you to:

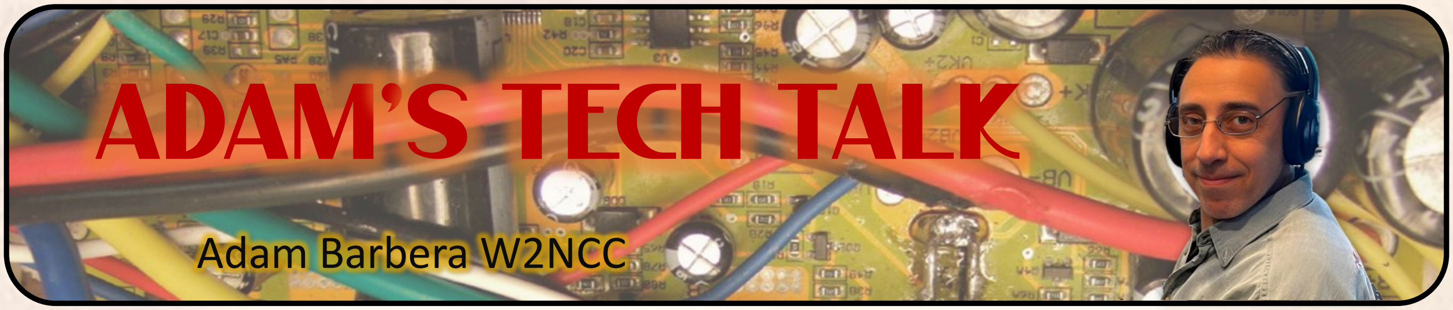
- Backup your radio's settings, in case they get lost or corrupted… you can easily restore from the backup stored on your USB drive or SD card
- Transfer settings between radios. If you have multiple IC-7610s, you can transfer your settings from one radio to another by simply copying the settings file from your USB drive or SD card.
- Share settings with others. You can share your radio settings with other ham radio enthusiasts by copying the settings file to their USB drive or SD card.

SanDisk
Ultra
80 MB/s
16 GB
SanDisk

The SD card can be an important asset to your station operation and can backup and restore core radio settings such as:

- Data settings and memory channel data
- Communication logs
- Voice audio clips for transmitting
- RTTY and PSK decode logs
- Screen captures

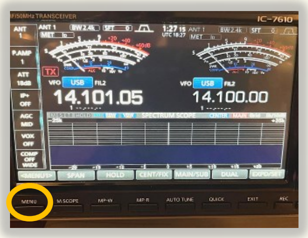
The USB drive will store data settings, memory channel data and screen capture but no other settings or radio information. You will need an SD card to take full advantage of the backing up and restoring radio settings. Also, an SD card is needed to create and store voice audio files. The radio supports SDHC (Secure Digital High Capacity) card from 4GB TO 32 GB. The club's Icom IC-7610 has a 32 GB SanDisk card which was purchased as part of a radio donation project. See the November 2023 issue of the Bark (page 12) for the article titled "Club's New Icom IC-7610 Radio" for details.



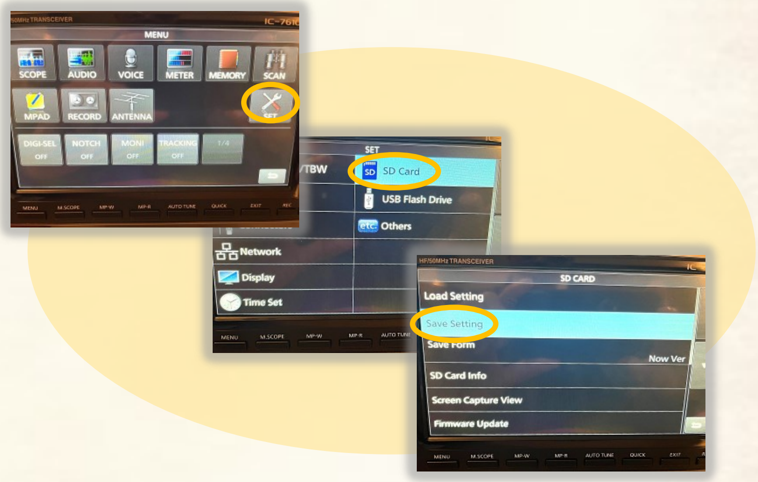
ADAM'S TECH TALK

Adam Barbera W2NCC

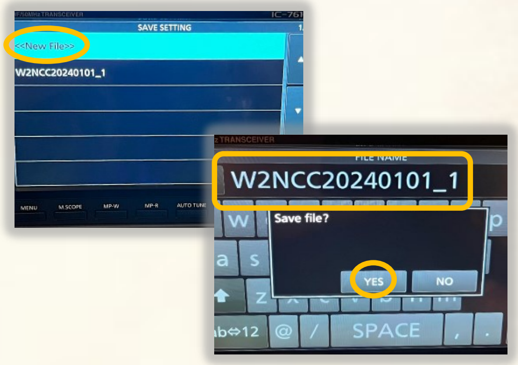
STEP BY STEP How to do it!


IC-7610
14.101.05
14.100.00
MENU

1. To save your radio settings, press the **MENU** button on the front panel


MENU
SCOPE
AUDIO
VOICE
METER
MEMORY
SCAN
MPAD
RECORD
ANTENNA
SET
SD Card
USB Flash Drive
Others
Network
Display
Time Set
SD CARD
Load Setting
Save Setting
Save Form
SD Card Info
Screen Capture View
Firmware Update

2. Select **SET**, then **SD CARD**, then **SAVE SETTING**


SAVE SETTING
<<New File>>
FILE NAME
Save file?
YES
NO
SPACE

W2NCC20240101_1

W2NCC20240101_1

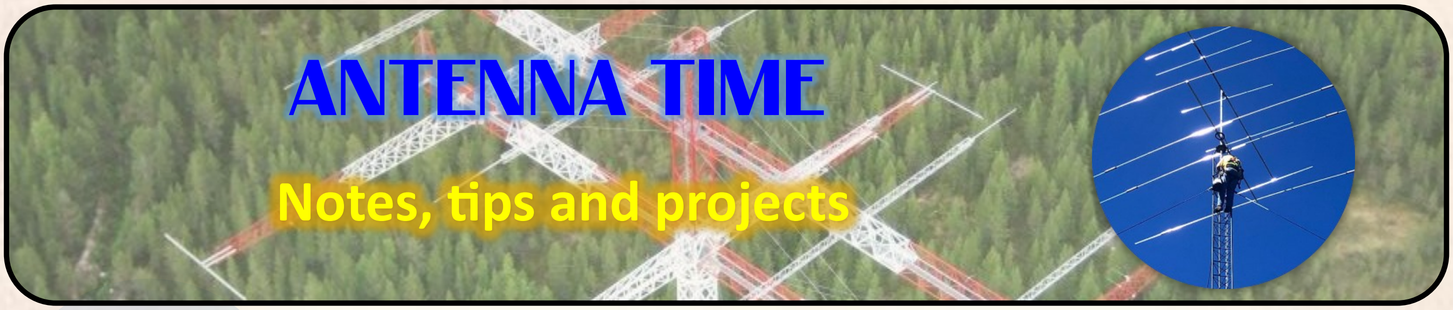
3. Select **NEW FILE** then enter the name of your file. I like to use my call sign and the date. This is super helpful if you're in a multi-user environment like at the Clubhouse or in a contest environment [where other users might want to save their own settings – *ed*] It's also helpful for sharing files among other IC-7610 transceiver users.

Restoring settings from the SD card is simple. Select "Load Settings" from the screen then select the file you want restored.

As you start setting up and configuring the radio, make backups! Plan on making incremental backups of your radio settings in case you need to go back a step to fix an error. This will give you reference points to refer back to. As a rule, make a full, complete backup of your radio after making changes. There is a lot of memory real estate on the SD card so why not use it?

That's it for this month!

Adam Barbera, W2NCC



ANTENNA TIME

Notes, tips and projects

UDA KNOWN?

VIRTUALLY ALL hams will know the words "beam antenna" when referring to directional antennas so often seen atop high radio towers of those hams lucky enough to own one. And most of those will know the word "Yagi" in the same context as Beam. But many fewer will know that Yagi is actually the last name of Hidetsugu Yagi who lends his name to the antenna design. And even fewer still—a small percentage actually—will know who Shintaro Uda was.

Remember how Steve Wozniak of Apple Computers was the brainy guy who invented stuff and Steve Jobs was the slick promoter who made the masses buy it? Well, it's sorta the same way with Uda and Yagi. Uda is the man who actually invented the idea behind the beam antenna: a directional array noted for very high "forward gain" - ability to "beam" a signal forward, while exhibiting a similarly powerful rear rejection, to reduce signal strength from 180 degrees away from where the antenna is pointing. Those two factors together form what is called "front to back ratio" and all of these things combined are what make a Yagi or beam antenna really snag that DX like no other antenna seemingly can.

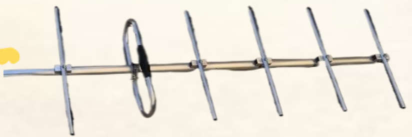
Hidetsugu Yagi

Uda did all of his theoretical design and analyses, followed by copious experiments while working as Yagi's assistant at Tohoku Imperial University, completing the essential design of the antenna in 1926, winning a joint Yagi-Uda patent that year.

But unfortunately Uda spoke virtually no English, so his senior partner and boss in the project, who did little of the actual design work, Hidetsugu Yagi, took the amazing announcement out to the English-speaking world and needless to say, won copious praise world-wide. He garnered numerous awards for this ingenious antenna technology, and ultimately the radio world began to call it by his surname, Yagi, rather than it's more mundane names of beam antenna and parasitic array. Mr. Uda largely went unnoticed and his name was pretty much lost to history among most hams. But at least Uda had the last laugh, passing away in August 1976, a full 7 months after Yagi. 私の勝ち（"I win!"）

Shintaro Uda

So next time you are drooling over a large beam high atop a tower, think "wow look at that amazing Uda up there! *Maybe someday!*" ■ *-editor*



Uda-Yagi antenna example

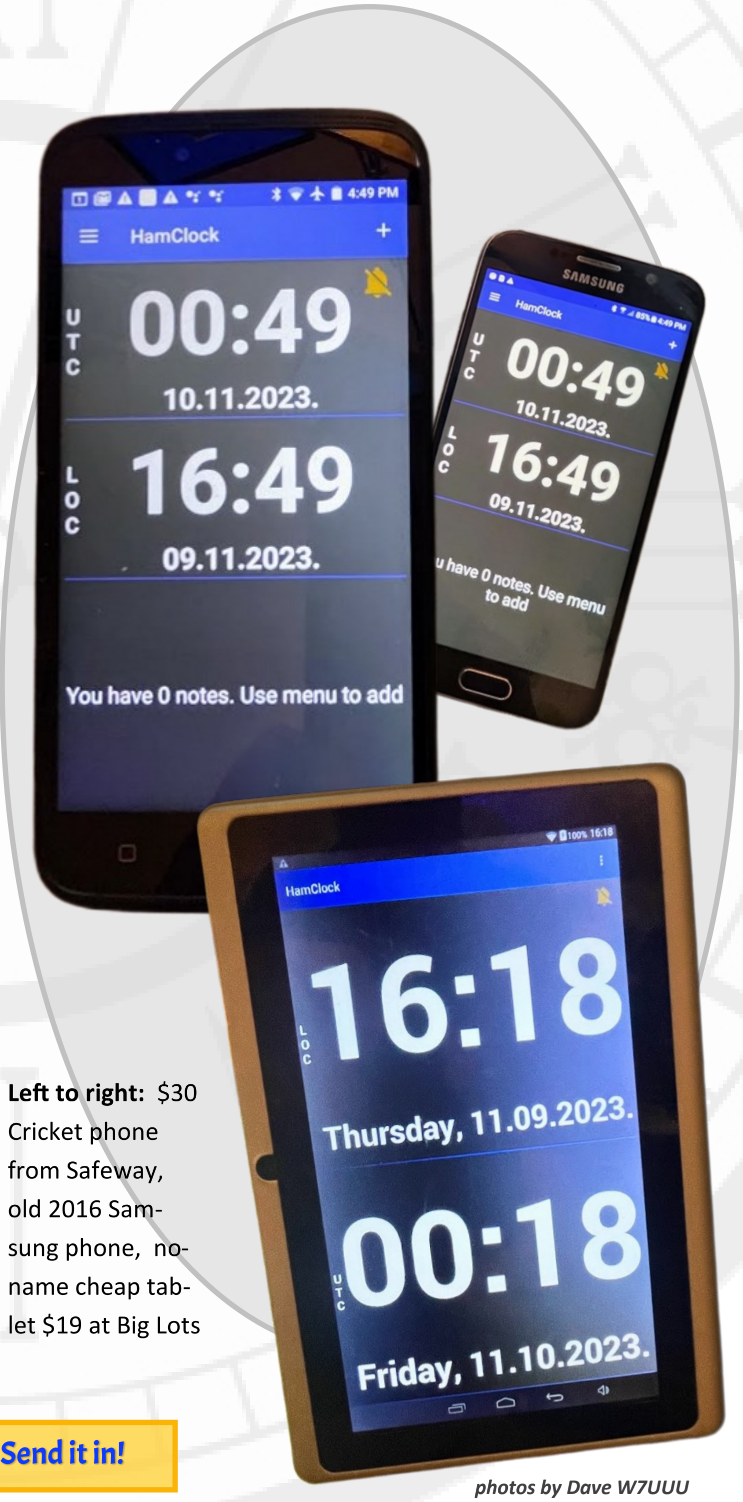
AROUND THE SHACK & SHOP

Little tips for when you get a round TUIT!

CHEAP & ACCURATE UTC CLOCKS

MOST OF US have old tablet-style devices or old smartphones laying around the house or buried in a drawer. Why not put them back to good use as a cheap but accurate UTC clock for your shack? You don't need it to have cell service—as long as you have a Wi-Fi network the device can access, it's easy! Once the device is dusted off and charged up (keep the charger handy!), simply navigate to the App Store for the device—Android (Google) or iOS (Apple) devices work equally well. Search for a free app called "HamClock" (one word). Just fire it up, and stick the clock to the shelf in your shack. But you do need to affix a power supply to keep it working and keep the display lit up all the time. Most smart devices will have a power setting that allows the screen to be lit any time the device is plugged into power. I have been using the three devices shown since about 2017 and have had no issues at all. So have fun while the Tempus Fugit!

■ *-editor*



Left to right: $30 Cricket phone from Safeway, old 2016 Samsung phone, no-name cheap tablet $19 at Big Lots

photos by Dave W7UUU

Did you know?

Prior to 1972, we used GMT or Greenwich Mean Time for standardized global 24-hour time. UTC stands for "temps universel coordonné" in French, with the letter arrangement of the acronym being a compromise between English and French abbreviation conventions (instead of TUC which the French proposed)

Got a shack or shop tip? Send it in!

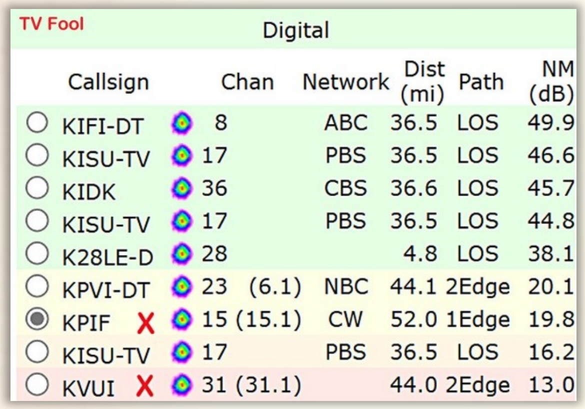
email loggersbark@gmail.com

KR7W's Acme Radio Lab
And Ham Shack Blather

TV IS RADIO *by Ricky KR7W*

PROLOGUE: Ms. Pat WT7N tells me that her **"Tis the Season"** Christmas TV movies are not showing up in the RECORDED section of our HDHomeRun Off the Air TV DVR system. What channel? I ask. It's the weak one, channel 15, she says.

I remember that from previous TV signal issues- that Digital Channel 15 comes from 52 miles away. To arm myself with information, I consult TV Fool, an online ap that calculates which TV channels are watchable in your neighborhood and suggests a type of antenna to use. Check it out, you may have some fun, and decide to cut your cord.

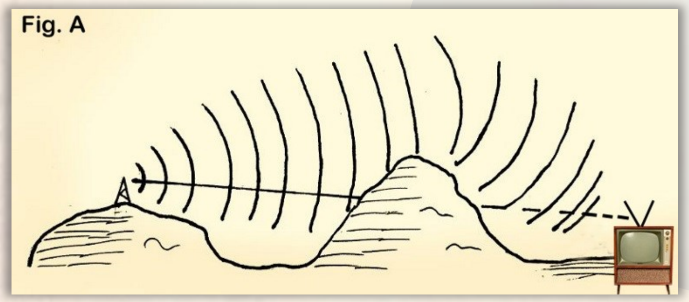


TV Fool — Digital

	Callsign	Chan	Network	Dist (mi)	Path	NM (dB)
○	KIFI-DT	8	ABC	36.5	LOS	49.9
○	KISU-TV	17	PBS	36.5	LOS	46.6
○	KIDK	36	CBS	36.6	LOS	45.7
○	KISU-TV	17	PBS	36.5	LOS	44.8
○	K28LE-D	28		4.8	LOS	38.1
○	KPVI-DT	23 (6.1)	NBC	44.1	2Edge	20.1
●	KPIF X	15 (15.1)	CW	52.0	1Edge	19.8
○	KISU-TV	17	PBS	36.5	LOS	16.2
○	KVUI X	31 (31.1)		44.0	2Edge	13.0

Oh look at the chart! The **RF** (Radio Frequency) Path of Ch 15 **is not LOS** (Line of Sight), instead it is **1 Edge**, meaning there is one **Knife Edge** geographic obstacle in the direct path that will cause the RF signal to **diffract** and attempt to go around the obstacle as illustrated in *Fig A:*

Fig. A



Diffraction graphic by Mark Baldridge

If you are interested: TV Fool will create colorful maps that will show obstructions that block the signal.

A short blurb on signal diffraction:
Radio Propagation Theory – The Mark Blog (markbaldridge.com)

So, why is there loss of usable signal on Ch 15 now? A few weeks ago Ch 15 was very receivable. What's changed? Perhaps it's: Winter weather is upon us. There is much snow at elevations above 6000 ft. My best guess is that the accumulated snow is providing additional diffraction and attenuation just enough to wipe out an already low RF signal. Again, best guess. What's your guess or theory? Let me know.

This Knife Edge phenomenon reminds me of Phil, K7PIA's 2 meter signal- where there is an escarpment like geological feature blocking the **L**ine **O**f **S**ight RF path between his QTH in Bonny Lake, WA and the Clubhouse W7DK Repeater which (it's my opinion) causes mega multi-path distortion.

The knife edge phenomenon makes sense to me. The Ch 15 transmitter is located at 6800 ft elevation. The Blackfoot Mountains are in the way of the RF Signal Path. The highest mountain peak being 7550 ft diffracts and attenuates the RF signal before it is received by the 6 ft long medium gain VHF-UHF Log Periodic TV antenna mounted in our homes attic. *Fig C :*

KR7W's Acme Radio Lab

And Ham Shack Blather

A log periodic antenna is similar to an Uda-Yagi antenna- directionality and gain wise, but can have hundreds of MHz of bandwidth. The antenna feeds a Televes adjustable gain Amplifier with FM and 5G signal filters. The Amp is mounted at the antenna then the signals are coax cabled to the TV receiver in the basement utility room.

With the Rigol **S**pectrum **A**nalyzer (*Fig. B*) in the attic, under the antenna, along with the power inserter that powers the amplifier- the six OTA RF signals were read and compared with the 'last time I did this' records. Previously Ch 15 measured -56 dB for pretty good reception, now it's less than -60 dB and no reception. The Antenna Amplifiers gain was increased until -56 was achieved. Now a 477 MHz Pip (white arrow) is seen on the Rigol display. At this time it seemed prudent to rotate the antenna for best 477 MHz signal level. But because of how the antenna's mast was previously attached to the attic rafters… not much rotation could be achieved.

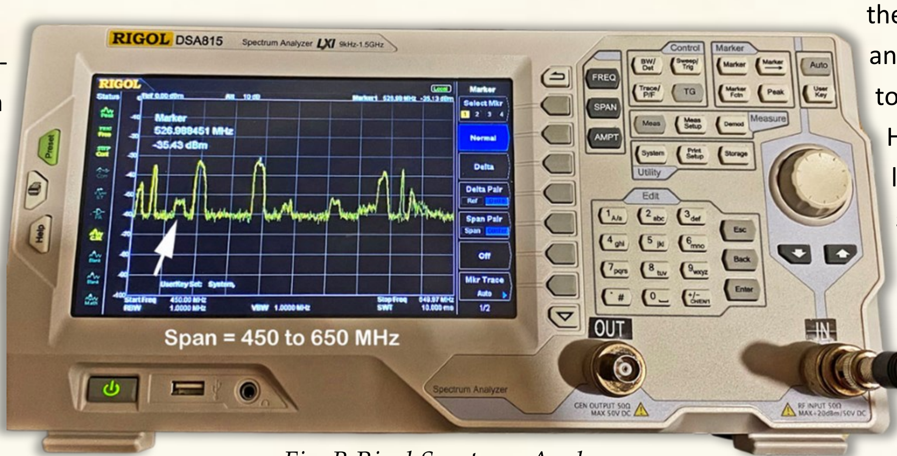


Fig. B Rigol Spectrum Analyzer

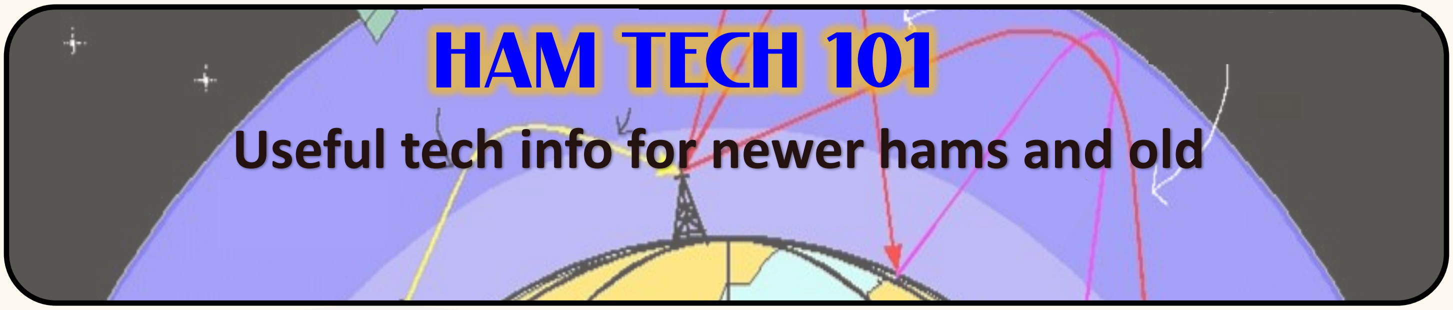
After a stare down between me and the rafters… it was determined that carpentry work needed to be done. A cross member between two vertical rafters was installed and the mast moved approx 18 inches north. The antenna is now capable of rotating plus-minus 30 degrees. But looky there: On the Rigol SA, the Ch 15 level has jumped up to neg 52-53 dB by only moving the antenna's position, not the direction. Without disturbing the antenna's position- the antenna mount was synched down to the mast and the remaining carpentry screws installed.

The HDHomerun TV Receiver seems pleased with its higher Ch 15 signal level. So far, OTA reception is good.

EPILOGUE: After I retired in 2012 I became a Volunteer at Mt Rainier National Park in the Radio and Telecom department for 9 years. I think the most enjoyable thing I did was to hike the backcountry with a backpack of radio test equipment to the old Fire Lookouts to perform maintenance on the Park's VHF radio repeaters. Whilst in the backcountry- once an hour, I was required to call in to the Mother Hen dispatchers and let them know my position and ETA. Many times I would PTT and call, "Dispatch this is 125", and get no response. However, if I moved up or down the trail 5 ft- I would be received with excellent signal quality. Was I in a Radio Sink Hole? Or maybe a **Knife Edge** obstruction blocking my signal.

Also, writing this article reminds me of RCT member Bud Mitze, K7BUD, who became SK in March of 2018. Bud would not allow a non-American Made car park in his driveway and we **both** did not want Cable TV wires to pass into our homes. We'd chat about the best gizmo and method to achieve the best OTA signal quality possible. We spent many enjoyable hours most Saturdays for many years discussing OTA TV.

- Photos & text by Rich KR7W



HAM TECH 101

Useful tech info for newer hams and old

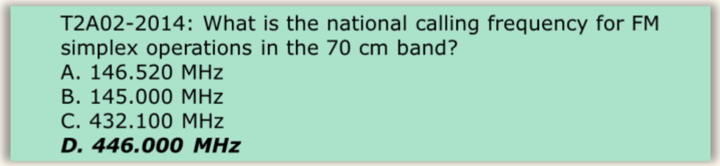
This column is reprinted monthly with permission of AF5NP from his blog www.NEWHAMS.info
References to FCC question numbers may be out of date but the content will still be accurate

National Simplex Calling frequency

A NATIONAL CALLING frequency in the USA is a radio frequency that is widely accepted and understood to be a place to start communicating with other hams.

This frequency is established for each RF band under the voluntary US band plan and is not regulated by the FCC. It is routinely monitored by any number of radio amateurs and is likely to result in a response when calling CQ or Mayday or SOS.

The US band plan shows calling frequencies for various modes (CW, SSB, FM, AM, digital) in different bands. A calling frequency list includes not only the modes but adds specific activities (expeditions, power levels) as commonly practiced.



T2A02-2014: What is the national calling frequency for FM simplex operations in the 70 cm band?
A. 146.520 MHz
B. 145.000 MHz
C. 432.100 MHz
D. 446.000 MHz

For new hams who are likely to get started in local VHF/UHF operation, the national calling frequencies to be concerned with are 2m and 70cm FM simplex (non-repeater). These are 146.520MHz and 446.000MHz, respectively, and should be included in your radio's scanned channels. If you regularly use 1.25m, 33cm and/or 23cm bands, there are national simplex calling frequencies defined per the band plan for you to look up.

Be aware that the national calling frequency for whatever mode and activity is only a place to start communicating. Protocol and common courtesy require that once contact is established, you move to another frequency (QSY) to leave the calling frequency open for others to use.

The national simplex calling frequency is sort of a universal (within the USA) place to make contact when you are not sure where to start. It is particularly useful when traveling to a new area where you don't know the repeater frequencies, offsets and access tones. It's also a great place to get assistance in an urgent situation.

Note that Canada largely follows the US national calling frequencies so our friends north of the border can be included in this scheme. Other countries may or may not have national call frequencies, or may unofficially follow the US plan.

This may also be a good time to remind all hams that while even the Technician license grants full privileges on VHF/UHF bands, and your 2m FM transceiver tunes from 144-148MHz, doesn't mean you can just randomly pick a frequency and key the mic.

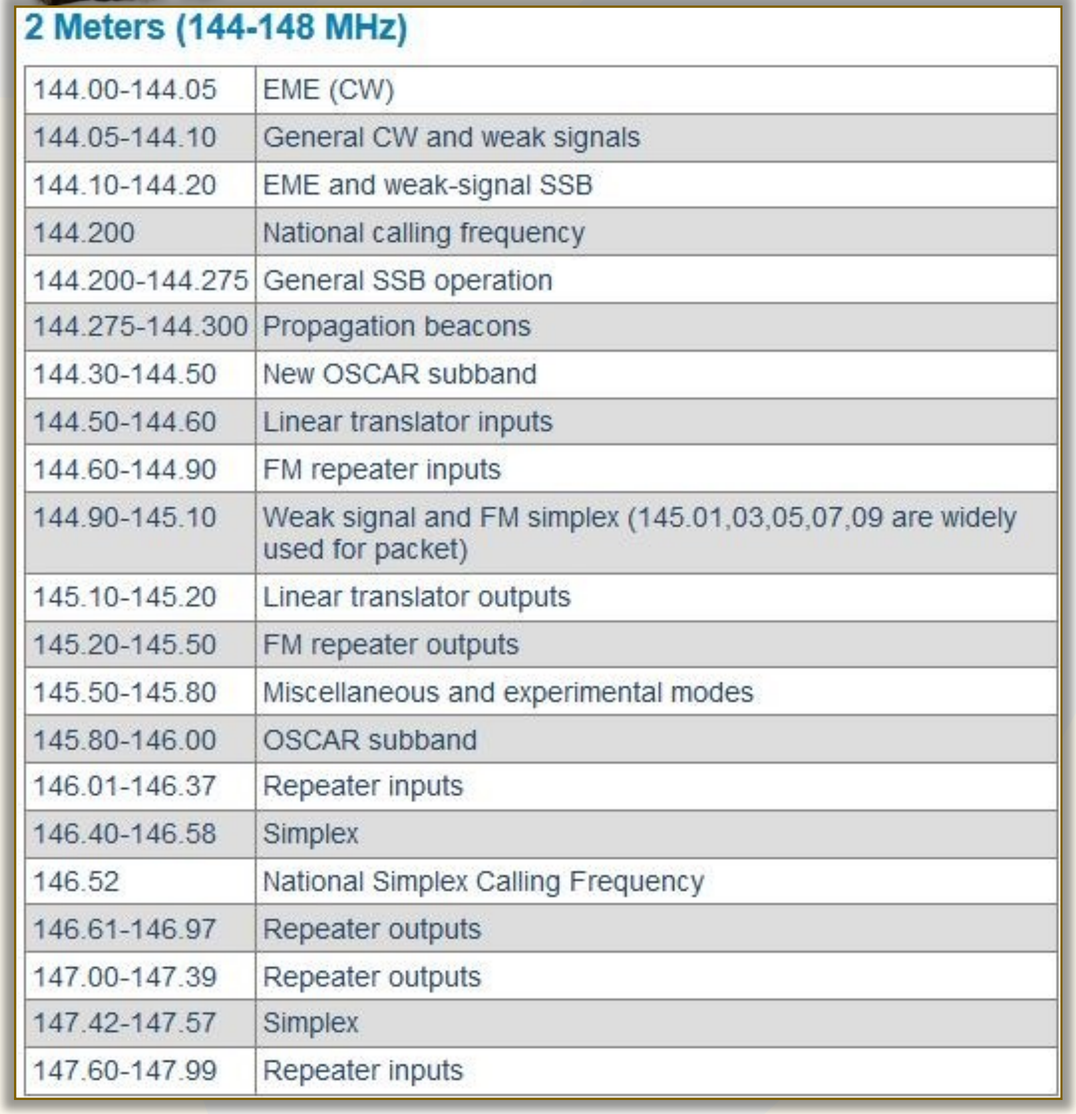
HAM TECH 101

Useful tech info for newer hams and old

IT'S UNLIKELY *anybody* is monitoring your random frequency. But mainly it's because there is a clearly defined band plan for 2m and it's not all FM simplex and repeater allocations. **Take a look at it:**

You can see that only a portion of the band is allocated for FM simplex or duplex (repeater) work. There are clearly-defined chunks for CW, SSB, beacons and satellite operation. You need to stay away from those frequencies unless you're operating those modes and activities per the plan. ■

Don't monkey around with just any old frequency! KNOW where you are calling!



2 Meters (144-148 MHz)

144.00-144.05	EME (CW)
144.05-144.10	General CW and weak signals
144.10-144.20	EME and weak-signal SSB
144.200	National calling frequency
144.200-144.275	General SSB operation
144.275-144.300	Propagation beacons
144.30-144.50	New OSCAR subband
144.50-144.60	Linear translator inputs
144.60-144.90	FM repeater inputs
144.90-145.10	Weak signal and FM simplex (145.01,03,05,07,09 are widely used for packet)
145.10-145.20	Linear translator outputs
145.20-145.50	FM repeater outputs
145.50-145.80	Miscellaneous and experimental modes
145.80-146.00	OSCAR subband
146.01-146.37	Repeater inputs
146.40-146.58	Simplex
146.52	National Simplex Calling Frequency
146.61-146.97	Repeater outputs
147.00-147.39	Repeater outputs
147.42-147.57	Simplex
147.60-147.99	Repeater inputs

GEAR

Guest Columnist: Dave Jensen W7DGJ

POTA ACTIVATIONS are *so* much fun, but they can be stressful at times. Perhaps you'd enjoy getting up and seeing some of the park you've activated after an hour or two of those pileups. On one recent outing my fingers were blistered from hitting the push-to-talk button. I must have caught the propagation just right or maybe the park I was in was really in demand. I felt like a DX station on some rare entity, and after an hour or two I needed a break. Have you considered inserting a hike or even a snooze under a shady tree into your portable radio routine? It's entirely possible when you switch over from POTA to WSPR!

WSPR Transmitter
MCU
USB
GPS
ZachTek

Zachtech WSPR Transmitter

WSPR is an acronym for Weak Signal Propagation Reporter. It is a protocol, implemented in a weak-signal radio computer program written by Joe Taylor, K1JT. It's by far the easiest of the digital modes to get involved with, as it's exclusively one-way transmission. It can be accomplished through a variety of very small gadgets.

Here's how I use WSPR . . . When I take a break from the activation, I take all my gear back to the car but leave my antenna up. I then attach one of Zachtek's tiny little WSPR transmitters to my coax, along with a cell phone battery pack. The total gear you need for this is about the size of pack of cigarettes, so you can hide it under a bush and walk away securely. (First, you set it up with a laptop in about two or three minutes). Harry Zachrisson builds these great little devices by hand over in Sweden, and they pack an unbelievable punch for about $150.

GPS Antenna
Transmitter Output
TX

WSPR Transmitter Inside view

I bought one and matched it up with my POTA whip for a couple hours of one-way beacon transmissions. I plugged it into my laptop after a hike and found out that this little transmitter of a fifth of one watt had been heard on both coasts of the USA, in Australia, New Zealand, British Columbia, and get this . . . Antarctica! All of this on an inexpensive Chinese vertical. I've lately been using it with an Alpha and also with a Chameleon, and getting even more stunning results. You'll get a great map of who's hearing you from the official WSPR website, and it will inspire you once again with the thought of how cool radio can be (and how valuable a tool your portable transceiver can be for emergencies).

Even if you've had a dismal POTA outing, you'll feel

(Continued on page 78)

GEAR

Guest Columnist: Dave Jensen W7DGJ

good about the map the WSPR website builds that shows your antenna's performance. For that latter, along with an antenna analyzer, it's a great tool for tuning your antenna. With the right gear, WSPR can be just another fun aspect of portable ham radio. ■

***Dave Jensen, W7DGJ**, was first licensed in 1966. Originally **WN7VDY** (and later **WA7VDY**), Dave operated on 40 and 80 meter CW with a shack that consisted primarily of Heathkit equipment. Dave loved radio so much he went off to college to study broadcasting and came out with a BS in Communications from Ohio University (Athens, OH). He worked his way through a number of audio electronics companies after graduation, including the professional microphone business for Audio-Technica. He was later licensed as **W7DGJ** out of Scottsdale, Arizona, where he ran an executive recruitment practice (CareerTrax Inc.) for several decades. Jensen has published articles in magazines dealing with science and engineering. His column "Tooling Up" ran for 20 years in the website of the leading science journal, SCIENCE, and his column called **Trials and Errors: Ham Life with an** Amateur continues to be a popular read each month on QRZ.com*

Read Dave's column at

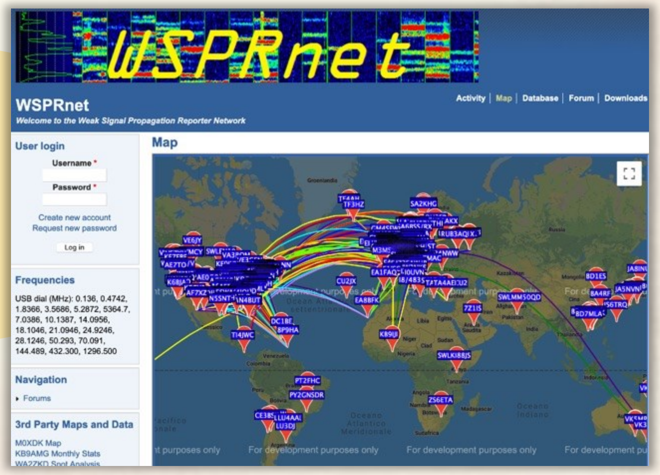
https://www.qrz.com/trials-and-errors

Did you know?

WSPR (pronounced "whisper") is an acronym for *Weak Signal Propagation Reporter*. It is a protocol, implemented in a computer program, used for weak-signal radio communication between amateur radio operators. The protocol was designed, and a program written initially, by Joe Taylor, K1JT. The program is designed for sending and receiving low-power transmissions to test propagation paths on the MF and HF bands.

WSPR implements a protocol designed for probing potential propagation paths with low-power transmissions. Transmissions carry a station's callsign, Maidenhead grid locator, and transmitter power in dBm. The program can decode signals with a signal-to-noise ratio as low as −28 dB Stations with internet access can automatically upload their reception reports to a central database called WSPRnet, which includes a mapping facility. If you really want to get an idea where your signal is reaching on earth, WSPR can't be beat!

■ - *editor*



WSPRnet

Welcome to the Weak Signal Propagation Reporter Network

Activity | Map | Database | Forum | Downloads

User login

Username *

Password *

Create new account

Request new password

Log in

Frequencies

USB dial (MHz): 0.136, 0.4742, 1.8366, 3.5686, 5.2872, 5364.7, 7.0386, 10.1387, 14.0956, 18.1046, 21.0946, 24.9246, 28.1246, 50.293, 70.091, 144.489, 432.300, 1296.500

Navigation

- Forums

3rd Party Maps and Data

M0XDK Map

KB9AMG Monthly Stats

WA2ZKD Spot Analysis

Map

QRZ NEWS YOU CAN USE

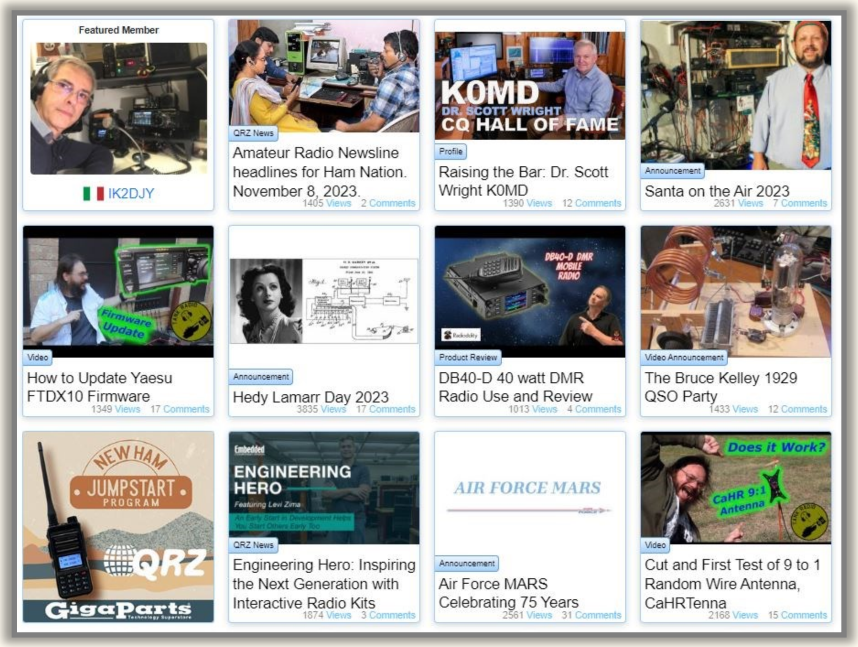
QRZ.com Updates from Dave W7UUU

Head Moderator & Director of Forums for QRZ.com

W7UUU

HOW DO NEWS ARTICLES GET PUBLISHED ?

ANY QRZ.COM USER who has ever visited the home page will be familiar with the "Hollywood Squares" layout on their screen. A number of the squares you see relate to specific functions, such as "Featured Member" and the Space Weather tile. But the majority of the square titles are links to the various articles published in the "Amateur Radio News" forum.



Featured Member

IK2DJY

QRZ News
Amateur Radio Newsline headlines for Ham Nation. November 8, 2023.
1405 Views 2 Comments

Profile
Raising the Bar: Dr. Scott Wright K0MD
1390 Views 12 Comments

Announcement
Santa on the Air 2023
2631 Views 7 Comments

Video
How to Update Yaesu FTDX10 Firmware
1349 Views 17 Comments

Announcement
Hedy Lamarr Day 2023
3835 Views 17 Comments

Product Review
DB40-D 40 watt DMR Radio Use and Review
1013 Views 4 Comments

Video Announcement
The Bruce Kelley 1929 QSO Party
1433 Views 12 Comments

QRZ News
Engineering Hero: Inspiring the Next Generation with Interactive Radio Kits
1874 Views 3 Comments

Announcement
Air Force MARS Celebrating 75 Years
2561 Views 31 Comments

Video
Cut and First Test of 9 to 1 Random Wire Antenna, CaHRTenna
2168 Views 15 Comments

So how do they move from the forum to the front page and become a title? The primary editor of the QRZ site is the CEO, Jaime KF7WIS. She does a terrific job daily reading all of the new posts that appear in the Amateur Radio News forum as post uploads from users. Each post is evaluated for its value to the amateur radio community at large: does it report an actual item in the news (not essential but that's a big factor), does it promote a technology or special event or just a personal discussion or interview with a noted ham operator?

There are a number of criteria that are considered. Once an article is chosen, Jaime (or sometimes site founder Fred AA7BQ, or on a number of occasions when called upon, myself) will then use the Staff Tools "Editorial Manager" to select an article from the Amateur Radio News postings. The tool then largely automatically formats the image from the posting into the familiar square to appear on the front page. A subject is then selected from a pull-down to indicate is this a video, an announcement, a profile of a prominent ham, or other relevant category. Sometimes, additional text overlays may be added but very often, those who regularly post to Amateur Radio News already know the preferred format for submission and have provided an image or thumbnail sufficient for the purpose.

Once all of this is selected, the ad is simply made live, and within a few minutes, updates onto the front page of the site.

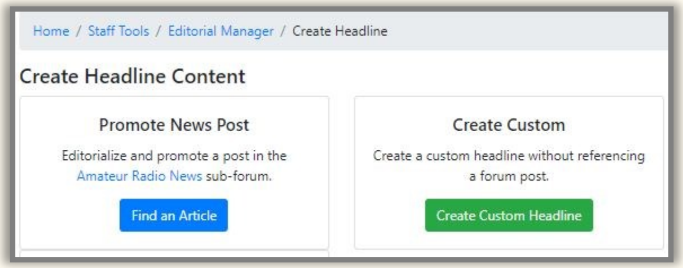
QRZ NEWS YOU CAN USE

QRZ.com Updates from Dave W7UUU

Head Moderator & Director of Forums for QRZ.com

W7UUU

SOME USERS will complain about the abundance of YouTube video submissions or the quality of them and the fact many are product reviews. The reality is, a great many hams use YouTube and in fact enjoy watching such videos. For as many complaints we receive about them, we receive double or more in positive comments. It's also good to know that 90% or more of the material that appears in the front page tiles is in fact user supplied which is great to know—users of the site itself are the most prolific "reporters" we have.


Home / Staff Tools / Editorial Manager / Create Headline

Create Headline Content

Promote News Post

Editorialize and promote a post in the Amateur Radio News sub-forum.

Find an Article

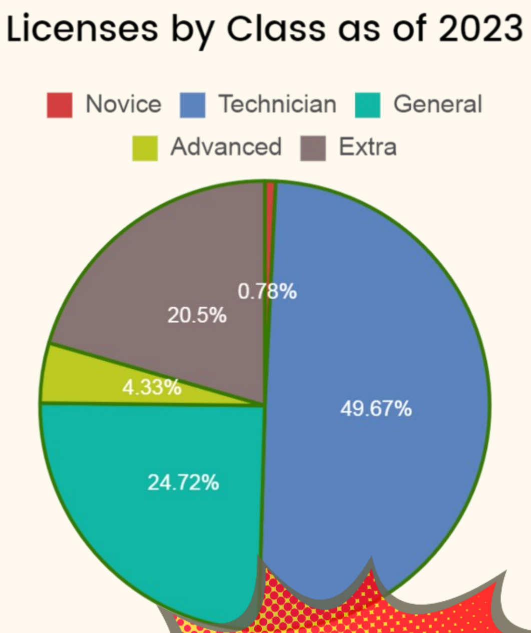
Create Custom

Create a custom headline without referencing a forum post.

Create Custom Headline

So that's how the process works. Next time you find yourself clicking on a tile on the home page and reading a story, you will know just how it got there in the first place. ■ *-Dave W7UUU*

Did you know?



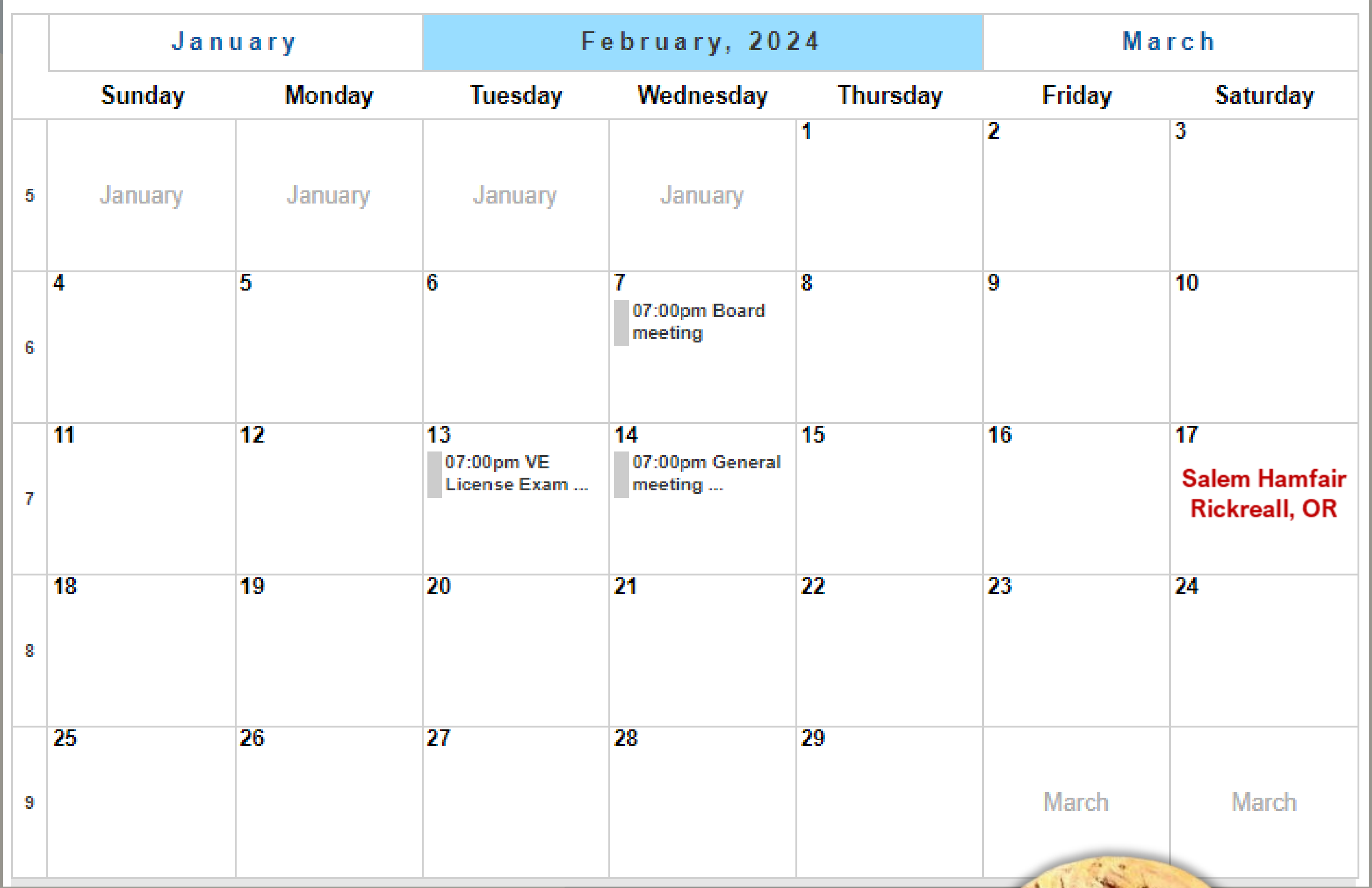
Tidbits

Ham operator Ira Fuchs, originally WB2CLL, co-founded BITNET in 1981 as a linked networking service from City U in NYC to Yale University. A precursor to the Internet, BITNET was the first networked system involving amateur radio. By 1984 the network had expanded all over the US, Canada, EU, Asia, and South America. Fuchs then went on to co-create LISTSERV. Now retired, Fuchs is back to ham radio

HELLO W7DK! I'M IRA!

CALENDAR FOR NEXT MONTH

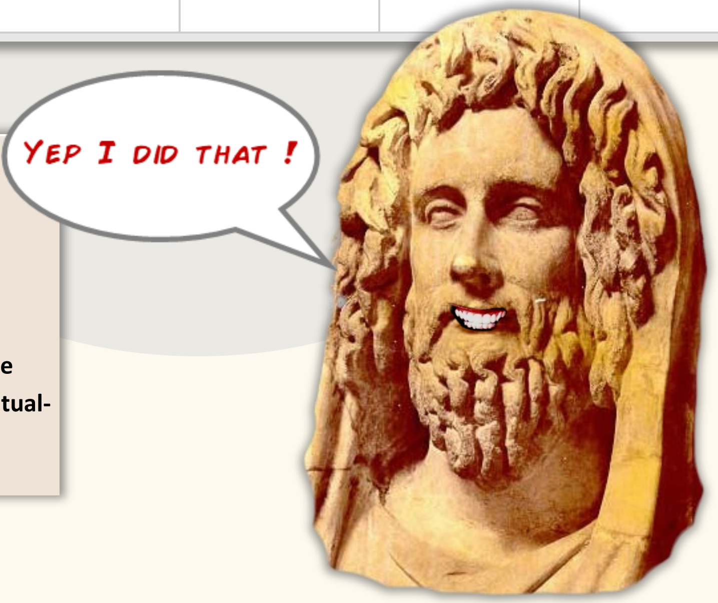
Always check the W7DK website for latest news



	January		February, 2024			March	
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
5	January	January	January	January	1	2	3
6	4	5	6	7 07:00pm Board meeting	8	9	10
7	11	12	13 07:00pm VE License Exam ...	14 07:00pm General meeting ...	15	16	17 Salem Hamfair Rickreall, OR
8	18	19	20	21	22	23	24
9	25	26	27	28	29	March	March

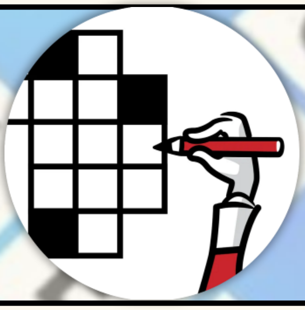
Did you know?

The original Roman calendar, said to have been invented by the first king of Rome, had 10 months. It started with March, which may seem kind of strange to us now. Later, Roman ruler Numa Pompilius added January at the beginning and February at the end of the calendar. Eventually February was moved between January and March.


YEP I DID THAT !

FUN AND GAMES!

Crosswords, Word Search, etc.



"Antenna Word Search" Print this page to play!

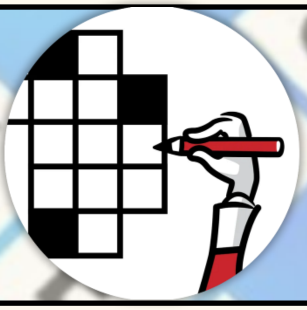
M	R	E	A	C	T	A	N	C	E	V	O	Y	I	I	H	D
I	B	I	J	C	E	Y	V	H	N	P	T	G	O	S	O	I
I	D	I	P	O	L	E	L	C	B	V	A	F	I	T	G	R
A	A	A	Y	G	G	R	A	O	A	Y	I	D	M	W	N	E
M	O	Q	U	U	M	B	C	M	L	L	Q	S	P	D	I	C
C	L	A	D	D	E	R	E	X	U	S	C	T	E	O	D	T
Y	U	G	A	M	M	A	Y	V	N	Y	Q	B	D	H	N	O
B	S	S	U	R	Z	A	T	L	E	D	R	C	A	H	A	R
N	L	U	H	V	O	S	A	E	S	R	P	M	N	G	T	S
D	A	F	J	C	M	T	M	O	D	N	A	R	C	O	S	V
E	I	I	V	I	R	B	A	D	T	X	Z	G	E	I	D	S
T	D	Y	T	I	A	A	A	T	E	A	F	P	E	G	F	T
A	A	H	E	J	N	Z	F	H	O	Y	Z	B	A	A	Z	E
I	R	E	A	M	V	T	S	T	U	R	M	B	Z	U	K	P
D	R	B	F	I	O	N	O	S	P	H	E	R	E	Q	K	P
A	S	B	N	H	L	N	R	E	S	O	N	A	N	C	E	I
R	P	C	F	H	W	E	R	D	N	A	K	F	Z	A	T	R

Impedance
Radiate
Quagi
Radials
VNA
Gamma
Reactance
Random
Cushcraft
Beverage
Standing
Director
Smith
Ladder
Andrew
Delta
EFHW
Yagi
ugly
Balun
Rotator
Dish
Dipole
ionosphere
Hex
NVIS
Resonance
SteppIR

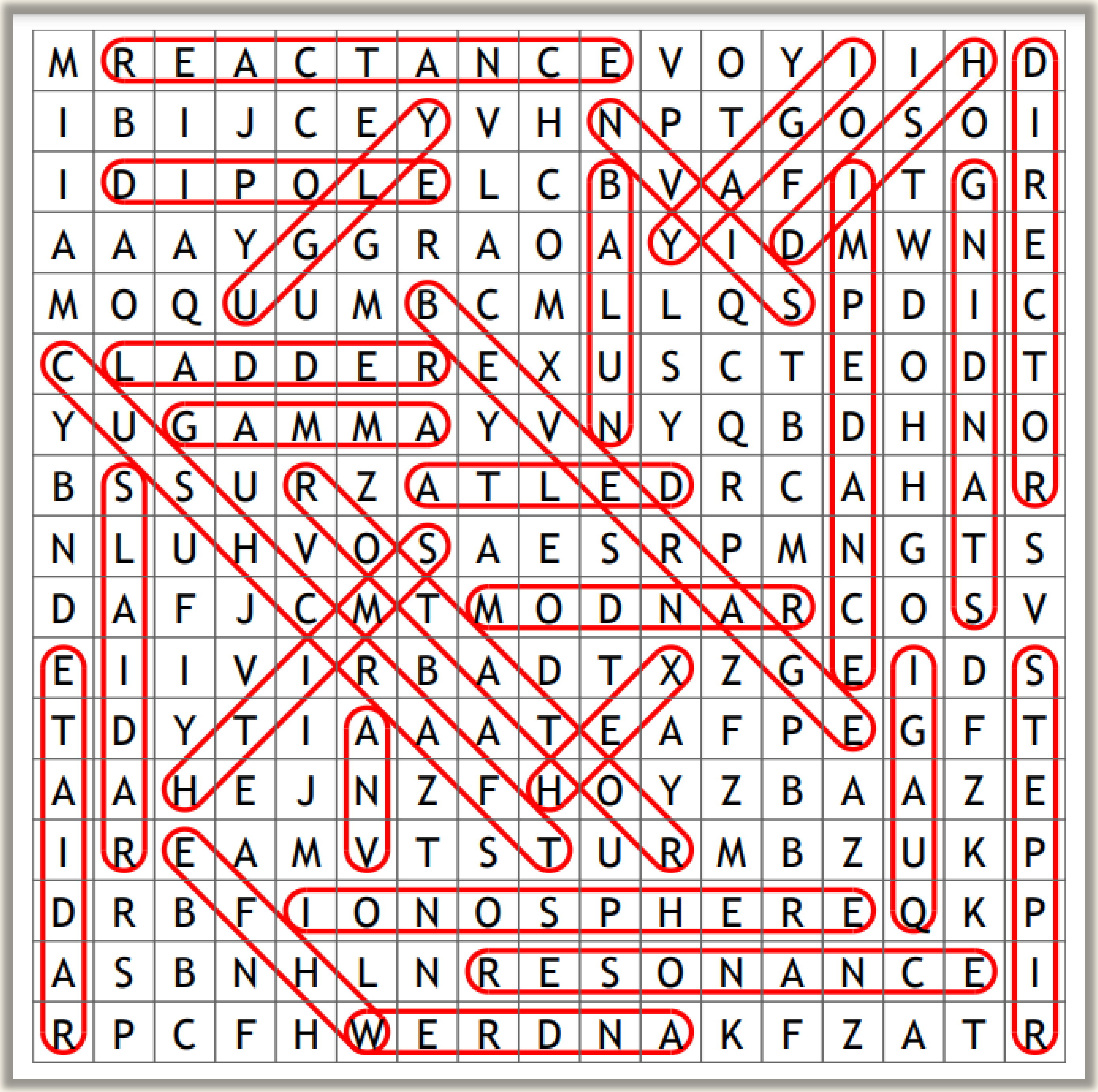
email loggersbark@gmail.com

FUN AND GAMES!

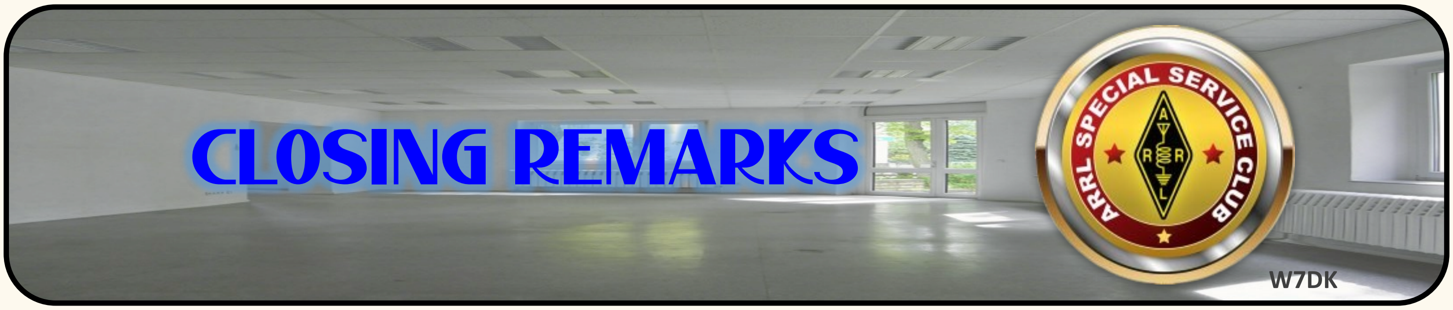
Crosswords, Word Search, etc.



Answer Key… but don't cheat!



M	R	E	A	C	T	A	N	C	E	V	O	Y	I	I	H	D
I	B	I	J	C	E	Y	V	H	N	P	T	G	O	S	O	I
I	D	I	P	O	L	E	L	C	B	V	A	F	I	T	G	R
A	A	A	Y	G	G	R	A	O	A	Y	I	D	M	W	N	E
M	O	Q	U	U	M	B	C	M	L	L	Q	S	P	D	I	C
C	L	A	D	D	E	R	E	X	U	S	C	T	E	O	D	T
Y	U	G	A	M	M	A	Y	V	N	Y	Q	B	D	H	N	O
B	S	S	U	R	Z	A	T	L	E	D	R	C	A	H	A	R
N	L	U	H	V	O	S	A	E	S	R	P	M	N	G	T	S
D	A	F	J	C	M	T	M	O	D	N	A	R	C	O	S	V
E	I	I	V	I	R	B	A	D	T	X	Z	G	E	I	D	S
T	D	Y	T	I	A	A	A	T	E	A	F	P	E	G	F	T
A	A	H	E	J	N	Z	F	H	O	Y	Z	B	A	A	Z	E
I	R	E	A	M	V	T	S	T	U	R	M	B	Z	U	K	P
D	R	B	F	I	O	N	O	S	P	H	E	R	E	Q	K	P
A	S	B	N	H	L	N	R	E	S	O	N	A	N	C	E	I
R	P	C	F	H	W	E	R	D	N	A	K	F	Z	A	T	R



CLOSING REMARKS

About this Publication

The Logger's Bark is the official publication of the Radio Club of Tacoma and is published by RCT, PO Box 11188, Tacoma, WA 98411. The Radio Club of Tacoma is a non-profit corporation as defined by law. All proceeds will be used exclusively for charitable and educational purposes. The Radio Club of Tacoma's Club House is located at 1249 S. Washington St, Tacoma, WA 98405 phone: 253-759-2040.

Emailing Officers

To contact any club officer, simply send an email to their call sign @W7DK.org

Contributions of Articles & photos

We **WELCOME** contributions of articles, guest editorials, blurbs, Hints-and-Kinks, shack photos, QSL cards, memorable contacts, anything of interest to your fellow members. Submit your materials via email to: loggersbark@gmail.com or via US mail to PO Box 11188, Tacoma, WA 98411

Radio Club of Tacoma Repeaters

Central Tacoma 2m:	**147.28 + PL Tone 103.5**
Central Tacoma 70cm:	**440.625 + PL Tone 103.5**
Crawford Mountain:	**147.380 + PL Tone 103.5**
North Tacoma:	**145.21 - PL Tone 141.3**

Membership Information

- FULL (licensed) and ASSOCIATE (non licensed) membership is $35 per calendar year or $30 for Licensed Seniors (65 and over)
- Licensed family members at same address pay $20 each for the first two and are free for the third, fourth, and so on.
- Full-time students, licensed or non licensed, up to age 25 are $20 per year.
- Fees are applicable for the calendar year: January to December
- Lifetime membership is 20 times the yearly fee you are eligible for. Lifetime memberships are calculated based on the FULL and ASSOCIATE rates.
- Visit www.w7dk.org For the latest and most current information on events and activities

Have a submission for our next issue?

loggersbark@gmail.com